

*B.C. 4496*

# ANNUAL REPORT

TO THE

CITY OF BIRMINGHAM EDUCATION COMMITTEE

OF THE

# SCHOOL MEDICAL OFFICER

GEORGE A. AUDEN, M.A., M.D. (Cantab.), D.P.H. (Cantab.),  
F.R.C.P. (Lond.).

INCLUDING THE REPORT ON THE  
SPECIAL SCHOOLS

BY

A. P. THOMSON, M.C., M.D., M.R.C.P.

FOR THE

YEAR ENDED 31st DECEMBER, 1925.

*In accordance with Circulars 576 and 896  
of the Board of Education.*

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Buckler & Webb Ltd., Church Street,



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P. D. INNES, M.A., D.Sc.

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## MEDICAL AND DENTAL STAFF.

### School Medical Officer:

G. A. AUDEN, M.A., M.D., F.R.C.P., D.P.H.

### Assistant School Medical Officers:

ELIZABETH J. MOFFETT, M.D., B.Sc.  
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\*J. JESSOP, L.D.S.  
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### Assistant School Dentist:

Mrs. J. L. DAVIES.

### Ophthalmic Surgeons:

\*H. W. ARCHER-HALL, M.R.C.S., D.O.  
\*A. W. ALDRIDGE, M.B.

### Aural Surgeons:

\*W. GLEGG, M.D.  
\*F. B. GILHESPY, M.R.C.S.

### Radiographer:

\*A. A. RUSSELL GREEN, M.B.

### Orthopaedic Surgeon:

\*NAUGHTON DUNN, M.B.

### Anaesthetists:

\*D. BUCHAN, M.B., D.P.H.  
\*H. W. FEATHERSTONE, M.A., M.D. } Dental Treatment.  
\*C. BRACEY DALE, M.R.C.S., Tonsil and Adenoid Clinic.

\* Part-time Officers.

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**SCHOOL MEDICAL OFFICER**

GEORGE A. AUDEN, M.A., M.D. (Cantab.), D.P.H. (Camb.),  
F.R.C.P. (Lond.).

For the Year ended 31st December, 1925.

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**ELEMENTARY, SECONDARY & NURSERY  
SCHOOLS.**

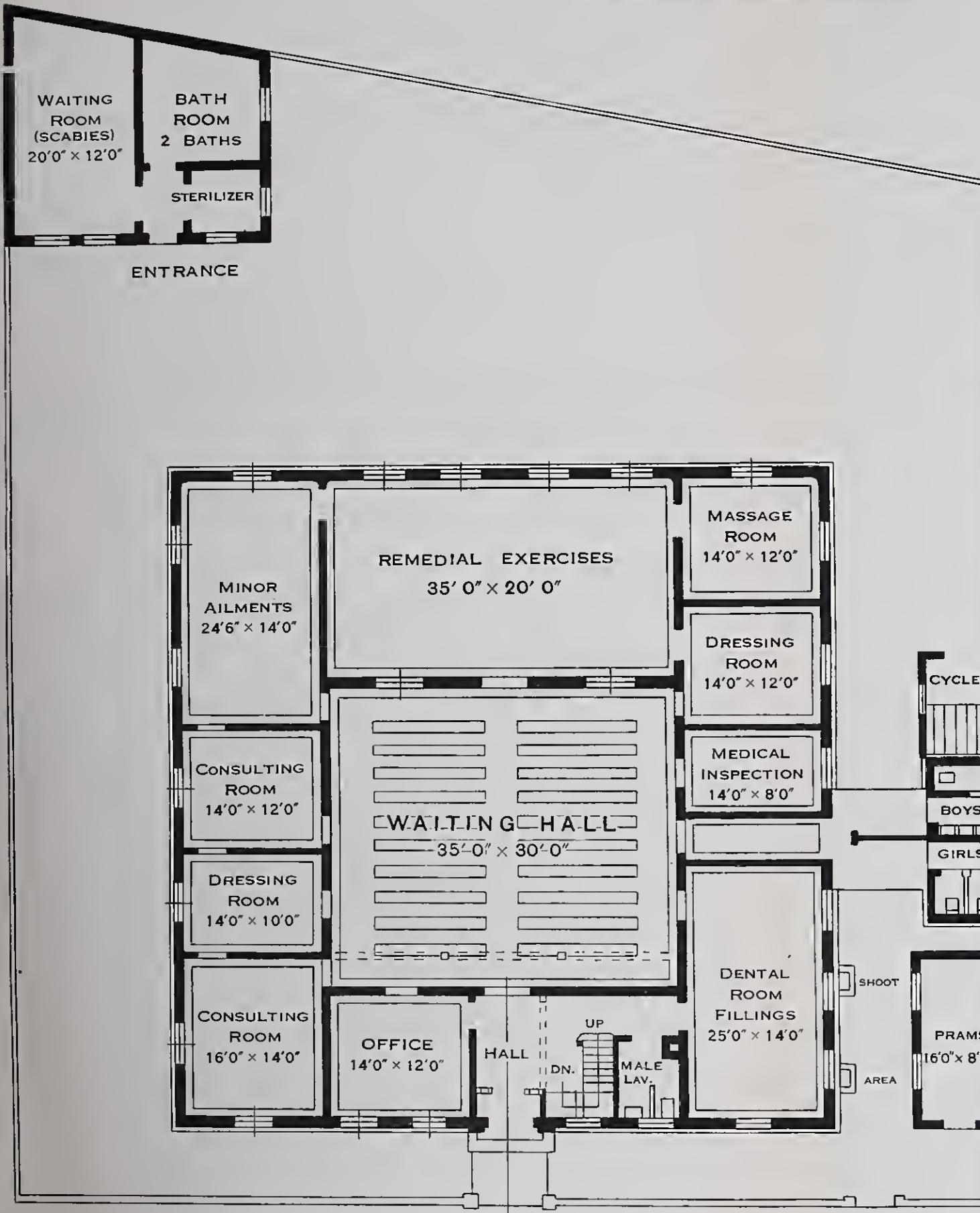
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Although the work of the Medical Department has been carried out on the same general lines as in previous years, certain new developments have taken place. The chief of these are :—

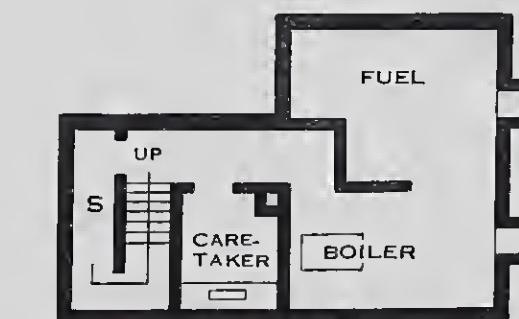
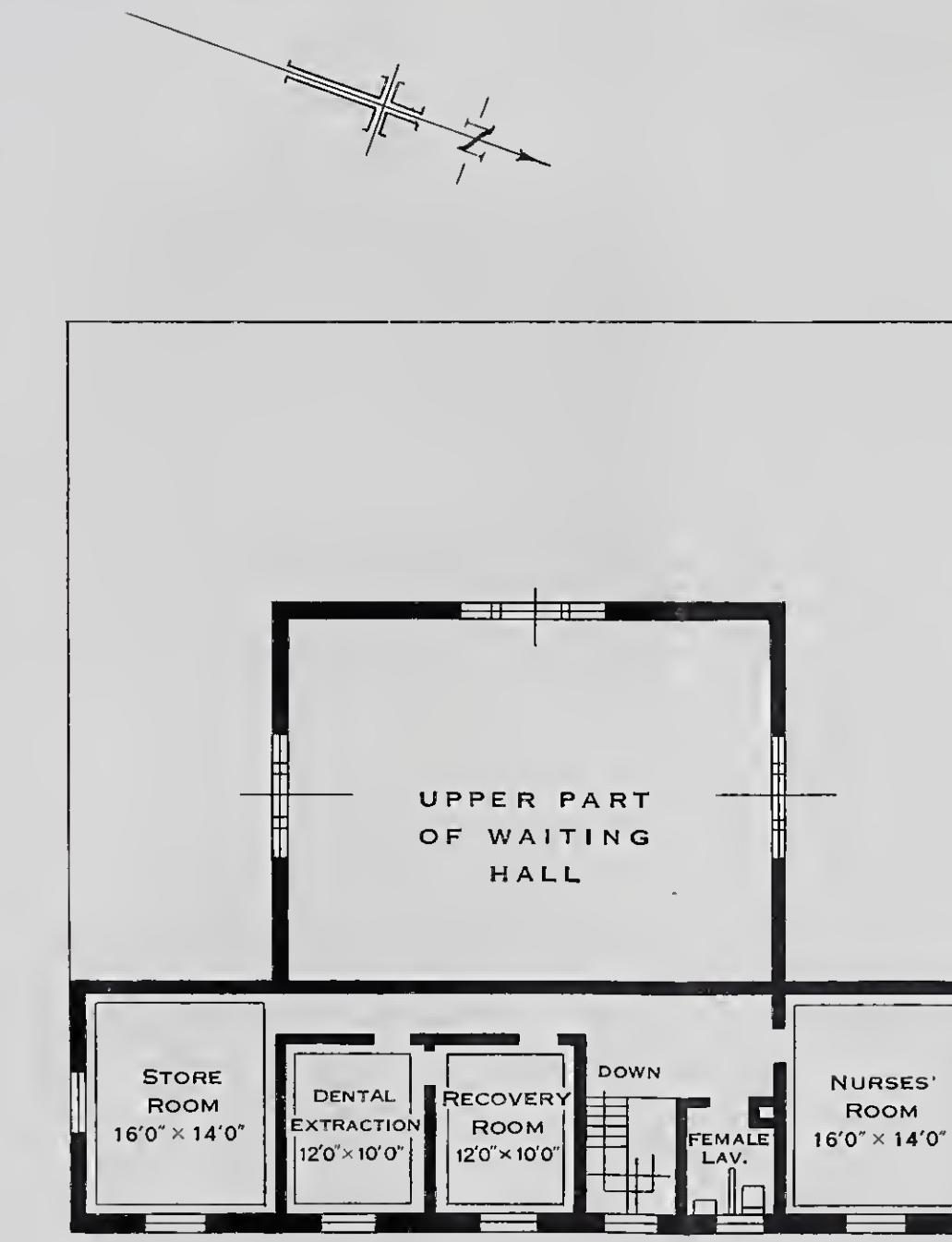
- (a) The development of the Aural Clinic : Since September last, Mr. Gilhespy, who had hitherto held one session per week for the examination and treatment of cases of discharging ears and other defects of the nose and throat, has given two sessions. In order to cope with the increased work of this department, a School Nurse now devotes her whole time to duties in connection therewith.
- (b) The Medical Inspection of the Schools under the King Edward's Foundation, with the exception of the two High Schools, New Street, has been undertaken. Thus, with the inclusion of the Handsworth Grammar School, which is to be brought within the scheme during the year 1926, the whole of the pupils of the aided Secondary Schools in the City, with the exceptions mentioned above, now come within the general scheme of a continued medical supervision which is carried out in the public elementary and secondary schools by the medical staff of the Education Committee. The advantages of such a unified system are manifest, for not only is the inspection carried out by the same staff, but also it affords an opportunity for the " following-up " of a very considerable number of children who have shewn defects while attending the Elementary Schools.

- (c) The erection of a new Clinic in Sheep Street. The work of clearing the site and of building this Clinic was begun in September last, and the Clinic will be opened in the course of the year 1926 to replace the totally inadequate premises in Gem Street which have hitherto been used for the purpose. The new Clinic will afford an opportunity for a considerable development in various directions to serve the needs of the whole of this area of the City. The position is peculiarly favourable, for not only is it situated in a densely populated area, but it is in close relationship to various tram routes, especially those of Alum Rock and Washwood Heath, Nechells and Aston. It will, moreover, allow a re-allocation of the numerous schools to the different districts into which the area is divided for purposes of medical inspection and treatment. It will be seen from the plan that accommodation is provided for two medical officers and two dental officers, and if and when an additional medical officer is appointed it is proposed to form a new area in order to lessen the pressure in the existing areas of Gem Street, Aston and Floodgate Street. With the growth year by year of the work of the Medical Department such a re-distribution becomes imperative, especially in view of the increased number of pupils now to be examined in the Secondary Schools. The two Medical Consultation Rooms are connected with a Dressing Room which has separate access to the large Central Waiting Room and the Minor Ailment Treatment Room. The larger western Consultation Room will also be used for ophthalmic work. For ordinary dental work the plan allows a large room in which two Dental Officers can work together. For cases requiring a general anaesthetic an Extraction Room is provided on the first floor frontage, together with a Recovery Room. Here also is placed a Store Room and a Room for the Nursing Staff. The greater part of the east side is occupied by rooms assigned to an Orthopaedic and Remedial Exercise Department. The large room will serve for such special remedial exercises as may be given to children in classes, but it will also be provided with wall ribs and other necessary movable gymnastic apparatus. The smaller room will be used for special cases, such as require massage, and, possibly, electrical treatment. This room is eminently convenient for an Ultra-violet lamp installation. A special Dressing Room is provided. The large Exercise Room presents other opportunities. It will be an easy matter to supply sufficient seats out of the Central Waiting Hall to convert it into a convenient room for parents' meetings, lectures and demonstrations. Moreover, the blank wall between this room and the minor ailment room presents a large flat surface which can be used for lantern or cinematograph projections. The Clinic will thus serve not only as a centre for inspection and treatment but as a valuable adjunct to health propaganda efforts. The Baths and Cleansing Department is situated in a detached self-contained building, fitted with two baths, a shower bath and a sterilizer for clothes. It has its own Waiting Room. A covered shed has been provided for perambulators and another for cycles. The new Clinic will thus prove a notable addition to the curative agencies of the City.

PROPOSED CLINIC - SHEEP STREET  
FOR THE BIRMINGHAM EDUCATION COMMITTEE



SCALE: 16 FEET TO AN INCH



HERBERT T. BUCKLAND, F.R.I.B.A.,  
ARHT. TO THE COMMITTEE,  
SEPTEMBER. 1924.

GROUND PLAN

FIRST FLOOR PLAN

BASEMENT PLAN



Indeed, when all the provision of the School Medical Service for special treatment in the form of beds for mastoid and tonsil and adenoid operations, treatment for ionization, for X-rays, refraction for eye defects, and the great mass of minor ailments are taken into consideration, the total sum of treatment undertaken by the Medical Department is comparable to the activities of a general hospital of considerable size, and shows how large a part is now played by the Education Committee in the attempt to improve the health of the children of the City. This may be seen in the following figures :—

Tonsil and Adenoid Operation ...	...	...	1,461
Mastoid Operation ...	...	...	37
Ionization for Otorrhœa ...	...	...	110
Refractions for Eye Defects ...	...	...	3,778
X-Ray Treatment of Ringworm ...	...	...	296
Remedial Exercise Cases ...	...	...	67
Minor Ailment Treatment ...	...	...	13,365
Children treated for Dental Defects ...	...	...	32,257
Children treated for Scabies ...	...	...	187

The work of the Medical Department has year by year shown a progressive growth in all directions, as will be seen from the following table :—

	1919.	1925.	Percentage Increase or Decrease.
No. of Children medically inspected ...	40,515	48,471	+ 19·6%
No. of Children treated for Dental Defects ...	20,299	32,257	+ 58·9%
No. of Children treated by X-Ray for Ringworm ...	477	323	- 32·2%*
No. of Spectacles prescribed ...	2,651	3,540	+ 33·5%
No. of Children operated upon for Tonsils and Adenoids ...	1,429	1,461	—
No. of Children operated upon for Mastoid Abscesses ...	None	37	—
No. of Children treated for Minor Ailments ...	12,295	13,365	+ 8·6%
No. of Examinations for Vermin ...	130,513	217,397	+ 66·5%

\*It will, of course, be understood that the decrease in the number of children treated for ringworm is due to the general reduction throughout the schools of the City of this parasitic infection, due to the intensive campaign which has been carried out. This decrease in numbers has allowed the Hygiene Sub-Committee to undertake the treatment of 27 cases for neighbouring areas of Warwickshire, Worcestershire and Shropshire.

But these figures do not give a complete view of the total activities of the Education Committee in promoting the health of the children, or of the various voluntary agencies with which the Medical Department works in close association. For example, the Society for the Care of Invalid Children has continued to do most valuable work on behalf of children who are suffering from Chorea and Rheumatism. The Secretary, Mr. Frank Mathews, has kindly supplied the following information of the work during the last nine months :—

Children sent to hospitals outside the City ...	13	{	11 still there.
,, boarded out in the country ...	51		33 „ „
,, sent to Convalescent Homes ...	13		7 „ „
,, sent to Llwyngwril for 3 weeks ...	10		
Total ...	87	=	

Experience has shown that, in the great majority of these cases, prolonged treatment in favourable circumstances is necessary. Thus the average stay up to the end of December had been 8·3 months in hospital and 6 months in convalescent homes. How great is the value which accrues, both to the children and to the community, may be gauged from the fact that only three have not done satisfactorily and that for the remaining 84 there is every prospect of cure.

The National Union of Teachers' Charities Fund has made grants of money in necessitous cases, and has distributed 3,208 hospital notes for the treatment of children at the following hospitals :

Eye Hospital	...	...	...	...	...	502
General Dispensary	...	...	...	...	...	1,963
Ear and Throat Hospital	...	...	...	...	...	264
General Hospital	...	...	...	...	...	200
Moseley Convalescent Home	...	...	...	...	...	58
Spinal Hospital	...	...	...	...	...	171
Dental Hospital	...	...	...	...	...	25
Queen's Hospital	...	...	...	...	...	4
Children's Hospital	...	...	...	...	...	10
Skin Hospital	...	...	...	...	...	11

Thanks are due to the Medical and Surgical Staffs of the Voluntary Hospitals for their help in dealing with special cases referred to them by Medical Officers of the Department. Dr. Ellis, Medical Superintendent of the Institutions under the Board of Guardians, reports that during the last financial year, 1,891 children were admitted to Dudley Road and Selly Oak Hospitals for treatment.

The Secretary of the Children's Country Holiday Society gives the following figures of debilitated children who have received convalescent treatment :—

1. Children sent on recommendation of Head Teachers	...	...	...	749
2. Children sent on special medical grounds	...	...	...	144
3. Children sent by Birmingham "Mail" Xmas Tree Fund	...	...	...	286
4. Children sent by "Weekly Post" Charitable Fund (Poor and Delicate)	...	...	...	282
5. Children sent by Jewish Branch	...	...	...	48

The qualifications for Class 3 have been changed, and the provision of free holidays for war orphans has been discontinued, the money being devoted to delicate and ailing children and to those whose home circumstances are so poor as to make a contribution to the holiday almost impossible. The children in Classes 1 and 5 were chosen on the grounds of poor health and home surroundings. Their holidays lasted a fortnight. The special cases in Class 2 are known as the Society's "Convalescent Cases," and of these 59 remained two weeks, 84 remained four weeks, and one remained twelve weeks, thus making a total of 466 weeks' convalescence for these weakly children.

The invigorating influence of time spent in the country or at the sea is now recognised as being in the main due to the clearer skies and absence of the murk of smoke, which allow the penetration of the shorter or ultra-violet rays to the earth's surface. The "vital rays," i.e., those

which chiefly promote growth and tissue activity, cannot penetrate a smoke-laden air, and, even if the sky is clear, are largely absorbed by ordinary window glass, and do not therefore enter the classroom. Hence, under the conditions of modern urban life the children cannot receive sufficient ultra-violet irradiation. Fortunately, however, the influence of exposure to sunshine is cumulative and the effects of a stay in the country persist for some time after return to the more sunless life of the town.

However, it is now irrefutably shown that the growth-promoting and curative value of sunlight can be artificially reproduced by carbon-arc or quartz lamps. We are, to-day, only at the threshold of the application of light therapy, but we know that there are many forms of debility in children which yield in an amazing way to a course of exposures to the light from such sources, especially during the winter months. There are some morbid conditions of which a complete cure can be effected by a few exposures only to ultra-violet radiation at a cost which is practically negligible. Indeed, no institution for the treatment of children is adequately equipped without an artificial sunlight installation. The initial cost is not heavy, and the running costs are exceedingly small. Such an installation is urgently needed, and both at Great Charles Street and Sheep Street Clinics there is very suitable accommodation. At the former there are numbers of children who attend the Aural Clinic whose cure would be quickened and rendered more certain if treatment could be accompanied by a course of ultra-violet treatment. It may be added that ultra-violet treatment is now being given at the Carnegie Institute for Infant Welfare.

### TONSILS AND ADENOIDS.

Since the opening of the Handsworth Tonsil and Adenoid Clinic, 15,787 children have been operated upon; 1,461 were treated during the past year, as against 1,426 in the previous year. This is the largest number of operations in any single year.

In the report for 1924 mention was made of the considerable number of children between two and five years of age who showed an enlargement of tonsils and adenoids which required operative treatment. Arrangements have now been made by the Health Department for these "toddler" children to be treated at the Children's Hospital. It is understood that about forty operations per month are performed under this scheme.

### AURAL CLINIC.

As has been already mentioned, the Aural Clinic had developed to such an extent that it was necessary to arrange for two sessions per week and for the services of a whole-time nurse. This arrangement has shown its value in the reduction of the length of the waiting list of children upon whose condition the opinion of the Consulting Aural Surgeon was required.

The ionisation apparatus has proved itself to be a most valuable method of treatment of Otorrhœa, and during the year more than a hundred children have been so treated. The average number of dressings and treatments carried out by Nurse Marsh, who is charge-nurse, is now 500 per month.

Mr. F. B. Gilhespy, Aural Surgeon, submits the following report :—

“A. Great Charles Street Aural Clinic.

“ Of the children treated the majority have been cases of otorrhœa. In addition there have been a fair number of cases of deafness with dry ears, and a minority of cases shewing nasal abnormalities causing symptoms, and a few with early infection of the nasal accessory sinuses. Some of the cases of deafness have been improved by a course of Politzerisation, given by the Nurse, while others have been reported for admission to the special schools for the deaf.

“ At the present moment it has not been possible to deal surgically with cases presenting symptoms of nasal disease, and these cases have been followed up at the Ear and Throat Hospital. In some cases children have been sent for a course of remedial breathing exercises.

“ In many of the cases sent to the Clinic the removal of tonsils and adenoids has been recommended as a preliminary to treatment being begun at the Clinic for deafness or otorrhœa. In the past it has been found that cases of otorrhœa, even if dried by treatment, will tend to recur unless the naso-pharynx is healthy, and in most cases of deafness a clear post-nasal space and a clean throat should be the starting point of any form of treatment. During the next year it is hoped that a greater proportion of cases sent to the Clinic will come with nasopharyngeal abnormalities already corrected.

“ It has been thought of interest from the larger field of preventive medicine to enquire into the causes of otorrhœa as seen in school children. In 145 children a very definite history of measles pointed to this disease as the cause of the complaint, i.e., in roughly 25 per cent. of the total. In eleven children scarlet fever was found to have originated the disease, i.e., 7·6 per cent. As measles is largely treated at home and occurs most commonly in the first five years of life, it would appear that a proportion of our school children will start their school life with a running ear due to that disease. It has been found, even after an interval of two to three years from the onset of the otorrhœa, that the removal of tonsils and adenoids in suitable cases will abolish the discharge.\* It would appear that an effort should be made to catch the children at the outset of their school careers.

“ The following two cases seen at the Clinic during the year are of interest in the above connection :—

- “D.” æt. 6. Otorrhœa since the age of 2.  
Tonsils and adenoids operation five weeks ago. Ear now dry. No other treatment given.
- “G.” æt. 12. Otorrhœa since infancy. Tonsils and adenoids operation 1924. Ear dry and membrane healed June, 1925. No other treatment given.

“ During the last year ionisation has been given and the results bear out those of the previous twelve months, and the results of the majority of others who have employed this form of treatment. The form of treatment is eminently suitable for those cases of otorrhœa in which there is a central perforation of the membrane of the drum. It is also often of value in cases in which there has been a large destruction of the membrane but in which there is no active attic or mastoid disease. The presence of either of the above complications of a simple middle ear suppuration, or the following complications, polypi or

---

\*Aural Surgery at a Fever Hospital (R.S.M., 1924; Vol. xvii., pp. 85).

granulations in the middle ear, cholesteatoma, total destruction of the membranes, persistent nasal discharge, render a cure by ionisation alone unlikely.

" In all cases a healthy condition of the naso-pharynx must previously have been obtained. The average number of applications necessary for the suitable type of cases has been found to be roughly three, given once weekly. It will be readily seen from the above description that the type of case which responds to ionisation will also be a suitable case for treatment by drops, drying out, etc. As, however, all such cases have been previously receiving treatment often for very long periods at a Clinic, it must be granted that this form of treatment results in a great saving of time and is much more certain and effective. As cases of otorrhœa are so numerous at the present time among our school population it is felt that a great number of cases can be treated during a year successfully by this method; the Aural Surgeon feels that it is a valuable method and should be persevered with in the future.

#### *"B. Operative Treatment at Selly Oak.*

" During the year 37 cases were treated at Selly Oak Hospital, where four beds have been allotted to our children. In each case some form of mastoid operation was performed; in 31 cases a Radical Mastoid, in two a Conservative Mastoid, and in the remainder a Schwartze Mastoid operation. All of these children had previously received long courses of treatment without satisfactory improvement, and, in the majority, the parents were anxious to have something further done even if this involved an operation, although success in stopping the Otorrhœa could not be guaranteed. In six of the cases a mastoid operation had already been performed elsewhere without curing the condition and, in the majority of the remainder, the recurrence of polypi after removal was the reason for the performance of the mastoid operation.

" Considerable responsibility is involved by the surgeon who advises the Radical Mastoid operation. The operation has been designed so that all diseased tissues, including the small bones of the middle ear, which are a part of the organ of hearing, should be removed and the cavity thus left should be lined by skin, continuous with that of the external ear. If this can be accomplished, the ear remains perfectly dry, except for the presence of cerumen and foreign matter.\* The presence of a skin lining to the cavity may be obtained either by the gradual growth from the external ear or more rapidly by grafting a portion of skin from elsewhere on the body. In all cases a graft has been utilized, taken from the thigh. From the above description it will be realized that the aims of the operation are to cure the ear discharge and to place the patient in a position of safety as regards the intracranial complications of middle ear suppuration. In attempting to attain these ends, no effort is made to preserve the ossicles if they are diseased. Improvement of hearing is not promised to the parents although, in certain cases, this occurs, but whether this is permanent is not yet proved. In the cases operated upon only those with severe deafness have been subjected to the Radical operation.

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\*In one case the nurse removed a bed-bug from the ear of one of these children, followed in the next week by a large flea.

" Out of 31 Radical operations, in 22 cases the ear is now dry, in six cases there is slight discharge (these include recent cases), and in three cases there is still a good deal of Otorrhœa. As the cases which are still discharging are under close supervision it is hoped that the majority of these will eventually dry and that the percentage of cures will be in the neighbourhood of 75 per cent. of cases operated upon. Any success obtained can be attributed to the use of a skin graft and a very efficient after-treatment by the Nursing Staff. I would like to express my gratitude to the Medical Superintendent, Dr. Martin, for the facilities always at my disposal at Selly Oak Hospital for treating these patients. In 1924, cases were not always skin grafted and the results obtained were, in such cases, not so satisfactory. It must be remembered that we are dealing with children whose health has deteriorated owing to years of intoxication from a septic focus. These children will not stand painful after-dressings, and unless dressings are thoroughly carried out the results obtained are not satisfactory. In the majority of cases where a graft is used the after-treatment is moderately painless—and can be done thoroughly. The average duration of stay in hospital was 28 days.

" In the two cases in which the Conservative Mastoid was performed the ear dried. It had been hoped that a greater proportion of children could have been operated upon by this method, in which the ossicles are not sacrificed and hearing is not interfered with, but the indications for this operation are hard to specify before operation and are often upset by what is found at the time of operation.

" In three cases a Schwartz operation was done, the mastoid antrum alone being drained. In one case the ear dried; in the others an intermittent nasal discharge which cannot be traced to any accessory nasal sinus reinfests the ear at times."

#### DENTAL TREATMENT.

No further development of the Dental Scheme has taken place during the year, the appointment of an additional Dental Officer, with the corresponding inclusion of a new Age group, having been deferred until the more favourable opportunity offered by the opening of the Sheep Street Clinic. The efforts of the Dental Staff have been towards the consolidation of the ground already won by an attempt to reduce the number of unkept appointments. The loss of time caused by the failure of parents to keep appointments made for their children is still regrettably large, but each year now shows some improvement. Experience has shewn that if a patient is absent at the time fixed for treatment, and a re-appointment is not kept, it is useless to continue to make further re-appointments for the individual child. Thus at Aston, where for the last ten weeks of the year only one re-appointment was made in the case of children who had not kept the first appointment, no less than 545 appointments were saved, and proportionately more children could be treated in the same period. This scheme is accordingly being extended to the other Dental Clinics as from the beginning of January, 1926. The contributory scheme, begun in 1925, whereby a sum of threepence is charged for each course of treatment, continues to work satisfactorily, and does not appear to exercise any deterrent effect. The fee may be remitted in necessitous cases in which the head teachers recommend free treatment.

Dr. Wilkins, late Principal Medical Officer, Education Department, New Zealand, has made a comparative study of the dental condition of children in Birmingham and New Zealand :—

" My first impression of the teeth of school children in England as compared with those in New Zealand was that dental decay was much less prevalent in England. This impression is amply confirmed so far as the children in Birmingham are concerned. I have used as bases of comparison (a) the number of teeth which are carious or have been treated for caries, *i.e.*, filled or extracted; and (b) the number of perfect sets of teeth, *i.e.*, complete naturally sound sets with no fillings or extractions. Both in the Birmingham and New Zealand figures extractions of temporary teeth have been ignored owing to the difficulty of deciding in some cases whether such teeth have been shed naturally or have been extracted for decay. With this exception (which is but a small factor in the total estimate and which can only affect the younger age-groups) differences in the extent of dental treatment in the two localities cannot affect the comparison. Throughout the investigation the recording of interproximal decay, so far as is possible without the aid of dental probe and mirror, and of the extraction of 6th-year molars at an early age, which may be easily overlooked by the time the child has reached the 12-14 year old group, have received careful attention. The Birmingham group, 14-16 years, is drawn from four secondary schools; the New Zealand group, 16-22 years, consists of student teachers. Though not coinciding exactly, these groups are sufficiently approximate for a general comparison.

Age-groups	Children examined.	Perfect Sets of Teeth.			Carious and Treated Teeth.			
		Number	Per cent.	B'ham : N.Z.	Number	Av. per Head	B'ham : N.Z.	
5-7 years	B'ham 953 N.Z. 1,111	158 40	16·5% 3·6%	4·6 : 1	3,617 7,926	3·8 7·1	1 : 1·9	
7-9 years	B'ham 205 N.Z. 898	23 10	11·2% 1·1%	10·2 : 1	607 5,586	3·0 5·5	1 : 1·8	
12-14 years	B'ham 744 N.Z. 645	181 4	24·3% 0·6%	40·5 : 1	1,412 4,549	1·9 7·0	1 : 3·7	
14-16 16-22	B'ham 351 N.Z. 344	64 1	18% 0·3%	60 : 1	890 3,828	2·5 11·1	1 : 4·4	

" The extent of dental caries in Birmingham is at every point strikingly less than in New Zealand. In the 5-7 year olds Birmingham has little more than half the decayed teeth of New Zealand, and has  $4\frac{1}{2}$  times the proportion of perfect sets. In the 12-14 year olds Birmingham has less than one-third of the decay and forty times the proportion of perfect sets of New Zealand. The contrast is still greater in the comparison of Birmingham Secondary pupils with New Zealand, though somewhat exaggerated by the difference in age of these groups. The superiority of Birmingham teeth is less striking in the younger age-groups, and increases as age advances. This confirms the impression which I had already formed, that the difference in the extent of decay in the temporary teeth in the two countries is less than the difference in the permanent teeth. The inferiority of New Zealand's permanent teeth is much greater than the inferiority of its temporaries.

"The following factors appear to have a bearing on the matter : (1) New Zealand Elementary school children on the whole enjoy a greater prosperity, and a higher standard of home life than those of Birmingham. (2) Enlightenment on the subject of infant-care through the clinics and visiting nurses of the Plunket Society results in a superior standard of infant feeding in New Zealand as compared with that of the average type of child examined in Birmingham. (3) The New Zealand general dietary is richer in dairy products and meat foods, and therefore richer in those elements the lack of which favour the development of rickets and poor nutrition. (4) Ultra-violet radiation from sunshine is much greater in New Zealand than in England. These four factors, according to the hypothesis of Mellanby, should make for the better nutrition of New Zealand teeth. On the other hand, (5) the frequency of daily meals and of eating between meals is very much greater in New Zealand, and (6) the consumption of sugar and confectionery is probably greater in New Zealand. These two factors, according to the Sim Wallace school of thought, favour the superiority of Birmingham. Another factor may be involved, namely, that growth in New Zealand is more rapid, the children being taller and heavier for age than in England. It is possible that this growth factor may accentuate the effect of nutritional deficiencies in interfering with the structural resistance of the teeth of children in New Zealand. The more complete evaluation of the causal relation to these factors is a matter for further study."

The Medical Research Council has recently published a report upon the incidence of Dental disease in children which gives some interesting figures of the relative incidence of caries in children in Birmingham and various other places. The whole investigation throughout the country was carried out on a uniform plan by a single observer (Mr. N. J. Ainsworth, M.R.C.S., L.D.S.), and though the figures are too small to justify definite deductions, yet they afford an interesting comparative study. All the figures have been treated statistically and corrected for age distribution.

The following table gives the figures of the highest and the lowest incidence as compared with Birmingham and those of London and Sheffield :—

	Permanent Teeth.			Deciduous Teeth (Upper Jaw).
Birmingham	...	...	...	11·2%
London	...	...	...	12·97%
Sheffield	...	...	...	14·59%
Country Schools in Norfolk and Essex	...	...	...	7·97%
Country Schools in Yorkshire and Cumberland	...	...	...	16·06%
				32·37
				44·69
				40·07
				25·90
				55·06

#### VERMINOUS CONDITIONS.

The improvement in the general cleanliness of the children has been continued, and 76·8 per cent. of children examined were found to be free from evidence of infection. The percentage for the previous year was 75. The accompanying table shows the satisfactory progress which has been made in this campaign :—

During the year 122 prosecutions of parents for verminous conditions were instituted.

Year.	No. of Examinations.	Ova.		Vermin.		Clean.	
		No.	%	No.	%	No.	%
1918	104,994	34,229	32·60	5,597	5·33	65,168	62·06
				37·9%			
1919	130,513	40,037	30·67	5,880	4·5	84,596	64·81
				35·1%			
1920	205,300	63,556	30·95	10,304	5·01	131,366	63·98
				35·9%			
1921	226,129	74,723	33·04	9,640	4·26	141,766	62·69
				37·3%			
1922	237,376	66,945	28·2	8,648	3·64	161,783	68·12
				31·84%			
1923	245,704	64,976	26·28	8,096	3·29	172,632	70·26
				29·57 %			
1924	276,936	58,783	21·2	10,266	3·7	207,887	75·
				24·9%			
1925	217,397	43,810	20·01	6,614	3·08	166,973	76·81
				23·18%			

The suggestion outlined in my last report, that facilities should be offered in the Clinics for the instruction and the use of parents of lightly infested children, has now been put into operation. At all the Clinics, with the exception of Greet (where the building does not at present afford the necessary accommodation), and at Floodgate Street, where the scheme is now about to be put into practice, parents, on application to the Assistant School Medical Officer or School Nurse, can bring their children and use the materials provided. The only occasions on which the Nurse actually helps is in the case of small children who have no mother, in which case the children are encouraged to come up for help from time to time. The purpose of the scheme is that the parents themselves shall carry out the cleansing under the direction of the nurse. It is not intended that these facilities shall be used as eleventh-hour expedients in cases where the initial steps of legal proceedings have already been taken. The part played by the School Nurse is that of giving advice as to the best methods of using the conveniences and materials provided. When the method has been explained, the parents may be reasonably expected to carry it out on subsequent occasions either at the Clinics or in their own homes.

## CHRONIC ALBUMINURIA.

There is one type of chronic affection in children which, though not relatively common or imposing in numbers, causes very prolonged absence from school and much interruption in education, i.e., a morbid condition of the kidneys which shows itself in an Albuminuria. This Nephritis may follow measles, whooping cough, diphtheria, and in fact any of the infectious diseases, while it is estimated to occur in 8·4 per cent. of all cases of Scarlet Fever. In addition, there are those cases of nephritis, frequently of insidious onset, not definitely attributable to any such infection, or preceded by an attack of tonsilitis. Some of these latter may, of course, be cases of mild or missed Scarlet Fever. If we add to these cases of true nephritis those instances of functional or "orthostatic" albuminuria not associated with organic kidney disease, but simulating it fairly closely, we have a group which furnishes for solution considerable difficulties, economic, educational and medical.

Functional albuminuria is fairly common; Dukes found it in 16 per cent. of boys entering Rugby. In itself it is not a condition of serious import, but when associated with anaemia and some degree of disordered heart action, it simulates nephritis and may cause apprehension and unnecessary loss of school time.

In children the prospects in nephritis are, on the whole, fairly hopeful, considerably better than in adults. This is particularly true when the condition follows upon scarlet fever. In any case the ultimate outlook is far more favourable than that of the child who has developed organic disease of the heart. The cases present themselves (1) in the acute stage, (2) in the sub-acute or chronic condition, and (3) as acute exacerbations in the course of the chronic disease. In either of these acute forms prolonged rest in bed, dieting and supervision are necessary. These measures are not readily obtainable, especially in poorer homes. The sub-acute or chronic stage is commonly prolonged and tedious, and on account of the chronic nature of the disease it is not always possible to secure the admission of these patients to hospital, so that many parents are unable to maintain adequate treatment. At this stage change of air is especially beneficial, and the majority of the children could be restored to reasonable if not complete health if adequate provision could be made for their treatment and education during their protracted illness.

## REMEDIAL EXERCISES.

The following enumeration shows the physical defects which have been under treatment at the John Bright Street Clinic :—

		Admitted.	Discharged.
Spinal Curvature and Postural Deformities	...	30	28
General Muscular Debility	...	3	4
Deformities of feet (flat foot, etc.)	...	20	14
Various types of Paralysis	...	4	4
Chest Deformities and Asthma	...	5	7
Injuries to Limbs	...	5	3

In addition 752 children have attended for breathing exercises after the removal of tonsils and adenoids at the Handsworth Clinic. During the year two conferences have been held between representatives of the Education and Health Committees to consider the possibilities of a comprehensive scheme to deal with the whole question of the prevention and treatment of crippling conditions. It cannot be asserted with too much insistence that cripples will exist so long as the causes of deformity remain, and that it is practicable to prevent the conditions that produce the cripple.\*

\*See Girdlestone, "The Care and Cure of Crippled Children."

It is true that the incidence of Tuberculosis, one of the main causal agents in the production of crippling, has been greatly reduced in the last quarter of a century, and that new clinical and surgical methods of treatment have vastly improved the outlook for the sufferer from Infantile Paralysis, but it will be long before these infections cease to operate. With the spread of the new knowledge concerning the vitamine constituents of foods, and the important part played by sunlight, natural or artificial, the disease of Rickets may be abolished or, at any rate, cease to be anything but a rare cause of crippling. It is clear, however, that in the campaign against crippling, both Health and Education Authorities must join forces. In the early autumn of the year a rapid census was made of the children of school age suffering from physical defects; 736 children were reported (of whom 214 were in attendance at Special Schools) who exhibited 771 defects. The age at onset of these was:—

Congenital Defects	...	...	...	153
Under five years of age	...	...	...	461
Age five years to fourteen	...	...	...	122

Thus 83 per cent. of these children had been handicapped by conditions which have arisen before they come under the supervision of the Education Committee. These figures include not only children who are in attendance at ordinary Elementary or Special Schools, but also children not in actual attendance but are known to the officers of the School Attendance Department. All children who show mental impairment associated with the physical handicap have been omitted, as also have all cases of such deformities as wryneck, flat foot, slight lateral curvature, etc., which are not likely to affect materially the physical efficiency of the individual in after life. These are cases which are suitable for treatment at a Remedial Exercise Clinic as distinct from an Orthopædic Clinic. The site of the crippling was as follows:—

Arm or hand	...	...	...	...	151
Leg or foot	...	...	...	...	564
Trunk or neck	...	...	...	...	56

while the causes have been thus classified:—

Paralysis	...	...	...	...	290
Tuberculosis	...	...	...	...	112
Rickets	...	...	...	...	137
Rheumatism	...	...	...	...	1
Other Causes	...	...	...	...	215
<hr/>					Total 755

In this enumeration of causes the figures for Tuberculosis are undoubtedly too low, for in a return supplied by the Associated Institutions of the Orthopædic Hospital and Cripples' Union of children of school age (587 cases) actually under their supervision, the percentage is 33·2. In a carefully compiled return made in 1910 to the Special Schools Sub-Committee this percentage was 39·2, and in a similar return made in 1920 it was 32·2. These figures are gratifying in that they show that very considerable progress is being made not only in an actual reduction of the number of cases of surgical tuberculosis, but in the provision of accommodation for their treatment. But the census shows further the need of a complete orthopædic scheme in which the different bodies, Municipal and voluntary, may all bear their part. As has been already pointed out, the new Sheep Street Clinic will offer suitable accommodation for examination, massage and electrical and light treatment, in addition to a Remedial Exercise Clinic on similar lines to that in John Bright Street, and will serve the children on the east and north-east side of the City.

Mr. Naughton Dunn has continued to attend the Remedial Clinic from time to time for consultation as to further treatment, and the Associated Institutions of the Orthopædic Hospital and Cripples' Union have again taken over a number of cases for whom operation was indicated.

### PHYSICAL EDUCATION.

The Organising Inspectors of Physical Education have supplied the following report :—

“ The Education Committee's policy in regard to Physical Training has progressed on the same lines as those of the past five years. The outstanding features of this policy are the provision of playing fields and of day-time classes for teachers. In addition to school visits and demonstration lessons the Organising Inspectors of Physical Training have organised and conducted the following classes for teachers :—

- 6 Day-time classes at the University—240 teachers attended.
- 1 Whitsuntide Vacation Course.
- 2 Lecture Demonstrations for Head Teachers in Infants' Departments
- 1 Lecture Demonstration for all teachers in Special Schools.
- 1 Course for Teachers in Infants' Departments.
- 2 Courses for Teachers in Evening Institutes.
- 11 Courses in the Modern Methods of teaching Swimming.
- 1 Course in Boxing for Teachers in Evening Institutes.
- 3 Teachers' Physical Training Associations, each meeting fortnightly.

#### “ Playing Fields.

“ In a short paragraph in this report last year, reference was made to the progress of Organised Games, and special attention was directed to the facilities provided for children in the Elementary Schools, and to the variety of games played. At that time the Education Committee owned seven playing-fields for the use of Elementary Schools, the total area of which was 58 acres. The number of such fields has now increased to eleven, and the total number of acres approximately to 115. In addition the Graham Street Trust has placed Selwyn Road playing-field at the disposal of the Committee for schools in the district. A staff of groundsmen is in regular employment for the maintenance of these grounds in good condition, as regards both surface and marking. Permission was obtained from the Parks Committee this year for the use of nine Recreation Grounds for physical training activities during school hours. These grounds are asphalted and have recently been resurfaced and marked for such games as Netball, Rugby Touch, Circular Pillar Ball, and Skittle Ball. Suitable storage and apparatus have been provided. Many schools still use Public Parks and a few if inconveniently situated in regard to the Education Committee's Fields use private grounds. Some schools take organised games in the playgrounds.

“ The use of special trams for the conveyance of scholars from schools in the “ Inner Ring ” to the playing-fields continues, whereby approximately 7,000 children are conveyed weekly.

“ Four special courses in organised games and school athletics were held at the University in September for teachers who take their own classes to the playing fields. Attendance was made by the teachers on eight half-days, and the number present was 160. The fruits of these courses are now to be seen in the improved organisation and greater variety of games, in the higher standard of coaching, and the consequent improvement in the style of play.”

## PROVISION OF SPECTACLES.

During the year, 3,540 pairs of spectacles were prescribed at the various Clinics. This is the largest number ever reported in a single year. In addition, however, to these, a number of children attend periodically for re-examination, especially those children who are under treatment for squint. Experience conclusively proves the absolute necessity of beginning to treat children suffering from convergent squint at as early an age as possible. It is a great advantage that treatment can be begun before the age of five in the case of children attending the Nursery Schools.

Educative treatment of the squinting eye, by covering over the good eye, gives excellent results when begun sufficiently early. It must be continued for several years, and it is, therefore, essential to see these children at three or six monthly intervals to ensure that the treatment prescribed is properly carried out. This "following up" of cases, moreover, encourages the active and continued co-operation of the parents, which is of the first importance in the production of permanent results. This year-long supervision entails a progressive increase in the children actually seen at the Great Charles Street Clinic, especially by Dr. Aldridge. The parents continue to keep the appointments made for their children very satisfactorily.

It is understood that arrangements are now being made by the Health Department for the supervision and treatment of "toddlers" between two and five years of age who have been found by the Health Visitors.

Mr. Archer Hall, Consulting Ophthalmic Surgeon, reports as follows:—

" 719 children attended the Clinic for examination and treatment, and for 602 of this number spectacles were prescribed. In the remaining 117 cases it was found that glasses were not needed, or that the lenses already worn by the child were correct. The 602 cases in which spectacles were prescribed were made up of the following refractive errors:—

Hypermetropia	...	...	...	...	...	...	...	55 = 9·1%
Hypermetropic Astigmatism	...	...	...	...	...	...	367 = 61·0%	
Myopia	...	...	...	...	...	...	...	27 = 4·5%
Myopic Astigmatism	...	...	...	...	...	...	107 = 17·7%	
Mixed Astigmatism	...	...	...	...	...	...	46 = 7·7%	

" Convergent strabismus existed in 95 children.

" With regard to patients suffering from a considerable visual defect, in 24 the sight was so affected that they were recommended for education at the Partially-Blind School, and two children were recommended for admission to the Blind Institution.

" Six cases of external disease of the eye were dealt with.

" A large number of patients were operated upon by me at the Birmingham and Midland Eye Hospital for squint and other ocular disabilities."

Dr. Moffett has been carrying out some observations of High Hypermetropia. These seem to form a group apart with certain special characteristics.

The amount of refractive error remains remarkably constant while under observation, which in some instances has extended over nine years.

The Retinoscopy works out at from +10D. up to +12D. or even +13D. There may be some astigmatism, usually not above 1.50D., and with a horizontal or oblique axis. On examination after a few months' interval the vision is found to have improved after suitable glasses have been prescribed, and practically all have ultimately attained full vision in one eye at least.

Improvement in school work is often quite remarkable after the glasses have been worn for some time. Before treatment some of these children are so dull and slow that they appear almost mentally defective. Probably the strain of focussing for near-work is so great that those who are not scholastically inclined learn to avoid near work as much as possible. So slow and hesitating are their answers that they convey the impression that they have never seen the letters clearly. Among the brighter children some overcome their eye-strain by a definite mental effort, and get V. 6/6 from the first. If these show no squint or symptoms of eye-strain they may pass muster in the school tests and are therefore missed. It is accordingly not possible to estimate the actual frequency of the condition. One bright girl of 13 was found habitually reading small print with a magnifying glass, although she got 6/6 vision without glasses.

With lower degrees of hypermetropia and astigmatism, a correction at ages 8—10 is often necessary to tide the child over the difficult period of learning to read and write. When once facility is acquired the glasses are often discarded. In others the original correction is no longer accepted, and it is found that the hypermetropia is becoming less, and may often even pass over into myopia. In contrast, the high hypermetropias remain remarkably constant. Even if a higher glass is accepted at re-examination, the retinoscopy shows no alteration, or practically none. The condition does not appear to be a morbid one, as in the case of certain forms of myopia. An analysis of the 116 cases shows a preponderance of boys, *i.e.*, boys 66, girls 50. Quite a number of the children under observation have had glasses before entering school or before their first school test, thus showing that the sight defect has been noticed at an early age.

#### SCABIES.

The high incidence of this parasitic disease during the war, due to the introduction into the homes of infections contracted on war service, necessitated an active campaign amongst the children attending school. Each year has shown a progressive diminution in the number of children found to be infected, and the condition is now possibly within measurable distance of practical extinction. 187 children received baths during the year. Only 13 children were subsequently reinfected from other cases in their homes. The following table shows the diminution in successive years :—

1918	...	1,139 cases.	1922	...	452 cases.
1919	...	1,202 ..	1923	...	307 ..
1920	...	976 ..	1924	...	213 ..
1921	...	675 ..	1925	...	187 ..

## RINGWORM.

Dr. Russell Green has, during the year, examined 449 children for diagnosis or treatment, of whom 296 have been treated by X-ray application. In addition a number of children have been treated for outside authorities, viz. :—

Warwickshire	...	...	...	...	...	...	10
Shropshire	...	...	...	...	...	...	11
Worcestershire	...	...	...	...	...	...	5
Sir Josiah Mason's Orphanage	...	...	...	...	...	...	1

The apparatus has continued to give very satisfactory results without any interruptions. Hitherto Dr. Russell Green has attended on three days per week, but, as from the beginning of the year 1926, a new agreement will be made, with the sanction of the Board of Education, whereby he will attend for one full session, upon which he will examine all cases presented to him and prescribe the necessary treatment, which will be carried out during the week by the Nurse-in-charge. This arrangement will effect a considerable saving of the time of the parents, for, hitherto, X-ray treatment has only been carried out on those days upon which Dr. Green has attended.

## CAMP SCHOOLS.

The Camp Schools at Canwell Hall and Blackwell have been continued during the summer months, and at the latter place an experimental camp was held during the Autumn and Winter months. This experiment proved very successful and, though the weather during the latter part of the time was bad, the improved general vigour and activity of the children were very evident and shewed that even a short period of two weeks under open-air conditions has for healthy children a marked influence. Given adequate clothing and abundance of food, cold weather is more invigorating than the heat of summer. Thirty-six boys from Arden Road Council School stayed thirteen days at the Camp, and were succeeded by forty girls from Gower Street School.

It may be added that the expenses for the Winter Camp have been defrayed by a Grant received from a local trust.

The Summer Camp at Canwell Hall received five groups of thirty-six boys from elementary schools in the poorer districts for two weeks.

At Blackwell, where the new buildings were completed during the summer, six batches of sixty girls had a similar stay of a fortnight.

Clothes and Sports Outfits were provided by a donation from the National Union of Teachers' Charities Fund.

## NURSERY SCHOOLS.

(A) *Selly Oak Nursery School.*

Dr. J. M. Alexander reports :—

"The total accommodation is 50—the average attendance for the year being 41, but during the Spring this was greatly reduced by infectious disease, viz. :—

Whooping Cough	...	...	...	21 cases.
Measles	...	...	...	16 "
Chicken Pox	...	...	...	14 "
Mumps	...	...	...	5 "
Scarlet Fever	...	...	...	4 "
Pneumonia	...	...	...	2 "

During the Summer months, however, the attendance improved, and very often every child was present. They improved considerably in health and physique as a result of the open-air conditions which are afforded by the new open-air shed.

" Three medical inspections took place during the year, at which every child was examined in the presence of the parent. During the year eight extra visits were paid by me, when any special cases were brought forward for advice and treatment.

" The common diseases found are bronchitis, otorrhœa, conjunctivitis, rickets and impetigo. One child has had special treatment in hospital for otorrhœa. During the winter months all the children have Malt and Cod Liver Oil with satisfactory results. The housing conditions of the children on the whole are bad. In one home six are sleeping in one room—in other cases four are sleeping and living in one room, and one family of ten occupies two rooms, while the youngest is unable to get to bed until a brother on night-duty rises.

" Home visits are paid regularly by the Superintendent and Nurse, which are much appreciated by the parents."

The Nurse (an Officer of the Selly Oak Nursery School Committee) attends daily for the morning sessions.

#### (B) *Summer Lane Nursery School.*

A monthly visit has been made by Dr. J. M. Alexander, who reports as follows :—

" The health and physique of the children are comparatively good, considering the poverty of the locality. Infectious disease has been less prevalent than at Selly Oak, viz. :—

Whooping Cough	...	...	...	4 cases.
Measles	...	...	...	9 ..
Chicken Pox	...	...	...	1 case.
Mumps	...	...	...	4 cases.
Scarlet Fever	...	...	...	1 case.
Diphtheria	...	...	...	1 ..

" Four children have been recommended for treatment by the Ophthalmic Surgeon, all of whom are wearing spectacles with satisfactory results. Two of the children had Ringworm of the Scalp—one has had X-ray treatment, the other by ointment, both being cured. One child had Ringworm of the Skin, which was also treated.

" For two children removal of tonsils and adenoids was advised, and in both cases the operation was carried out.

" Six children suffering from Bronchitis were advised to take Virol, and have made considerable improvement. All the children are having Malt and Cod Liver Oil during the Winter months.

" From January to September home visits were paid by the Superintendent and Nurse, making a total of 102. From September to December, visits numbering 230 were paid by the Nurse. In September the number of children on roll was raised by the adaptation of three rooms of the adjacent house. Ultimately there will be 92 children on the register. There is still, however, a long waiting list of urgent cases.

"The social conditions of the parents can be gauged from the following summary :—

	FATHERS.	MOTHERS.
Dead ... ... ... ...	4	—
Deserted Family ... ... ...	2	2
Unemployed (including invalids) ... ...	19	Housework.
Employed (including hawking) ... ...	42	25

"Of the mothers employed 13 work in factories, 5 keep small shops, 3 deal in old clothes, 2 are charwomen, and 2 are outworkers at home."

#### (C) Dartmouth Street Nursery Class.

Dr. Stooke reports :—

"Visits were paid monthly, and children entering during the month examined, and special cases inspected. The most common reason for admission has been the prevalence of unemployment in the district, with the result that the mothers are at work or looking for work. In one or two cases where the mother is at home there is a large family with several children under five years of age, e.g. :—

FATHERS.	MOTHERS.
Out of work ... ... 9	At work ... ... 12
Part-time ... ... 4	On outlook for work ... 3
Ill ... ... 3	Ill ... ... 3
In Asylum ... ... 1	Widows... ... 3

"In fourteen families there are other children under five years of age. The majority of these children come from houses shared by two or more families. We find the children at the Nursery Class are better supervised at home than those of school age, so that we have had to complain of one case of vermin only, and one unwashed and uncared-for child. Impetigo, on the other hand, occurred fairly frequently. The points of interest brought out by the examination of entrants are that enlarged neck glands are much less frequent, and that bronchitis is more frequent than in children of school age.

"Sixty-three home visits were made by the School Nurses either in connection with minor ailments or in reference to non-attendance."

#### EPILEPTIC REGISTER.

During the year 29 names were added and 31 names removed from the register, which at the end of the year contained the names of 112 children who are able to continue to attend the Elementary Schools under supervision and periodic re-examination.

#### REMAND HOME.

During the year I have examined 40 children at the Remand Home, either on committal to an Industrial School (26) or on remand for a special report to the Magistrates. Several other children were brought for examination by probation officers and voluntary workers. In a very large number of those examined there was evidence of a mal-adjustment at home or in their surroundings, which appeared to be the real basis of their misdemeanours and faulty behaviour. The systematic psychological examination of every child charged with an offence other than trivial would lead to a better understanding of the causal factors which underlie juvenile delinquency.

### FEEDING OF NECESSITOUS CHILDREN.

Free meals have been provided at nine Council Schools in kitchens equipped and staffed by the Education Committee, and at eighteen Centres under contract. No change has been made in the scheme or in the menu of the food provided. The meal is given as a two-course dinner on every day of the week.

		1922	1923	1924	1925
Total number of meals ...	...	671,627	270,849	249,825	231,037
Daily average, 1st January	...	3,492	1,154	728	832
" " 1st July	...	971	537	559	554
" " 31st December	...	1,154	759	816	679
Total number of children who received meals	...	8,263	2,409	2,355	2,071

The total number of children who have received free meals thus shows a slight reduction, as compared with the figures for 1923 and 1924.

Each of the feeding centres is visited periodically by the members of the Medical Staff.

### SECONDARY SCHOOLS.

As has been mentioned early in this report, medical inspection has now been extended to include the schools of the King Edward Foundation (with the exception of the High Schools, New Street), viz. : Aston, Camp Hill, Five Ways, and Handsworth.

4,538 examinations were made of 4,269 pupils in the various Secondary Schools. The number who were found to require treatment was 938, or 21.9 per cent. This is a slight increase on the percentage of the previous year (18 per cent.) and is for the most part due to defective vision.

Treatment of such minor ailments as may be discovered has been obtained by the parents in the great majority of cases. In a few cases (22) where special circumstances have indicated, especially in cases of defective vision, it has been carried out by the Medical Officers of the Committee.

### MEDICAL EXAMINATION OF INTENDING TEACHERS.

I have examined 210 intending teachers with special reference to the determination of their physical fitness and suitability for the teaching profession, viz. :—

		Boys.	Girls
Bursars	...	15	60
Student Teachers	...	20	76
Pupil Teachers	...	—	10
Preparatory Class Pupils	...	—	29
		35	175

This examination is in addition to the periodic examinations at the Pupil Teacher Centre of Dr. B. S. Alexander, whose report is below:—

### PUPIL TEACHER CENTRE.

During the year seven visits were made to the Pupil Teacher Centre for medical inspection, including one for the examination of special cases. A total of 221 examinations were made—consisting of 166 routines, 51 specials, and 4 re-examinations. At the routine inspections it was found that 26 defects required to be treated, and 38 were in need of dental treatment.

As in former years the defect which most predominated was defective vision. In this connection, 71 per cent. were found to have normal vision, 8 per cent. had a defect of one eye, and 21 per cent. of both eyes.

*Comparison of Physique, 1895—1925.*

In 1895, Dr. B. C. A. Windle, Professor of Anatomy at Mason College,\* made an investigation into the physical characters of a group of Birmingham pupil teachers, and from it found that 70 per cent. had normal vision, 9 per cent. a defect in one eye, and 21 per cent. in both. A comparison of the eyesight in 1895 and to-day shows that, on the whole, there is a slight improvement, but that defect of both eyes shows the same frequency.

The hearing of the present pupil teachers shows an improvement, for only one case of deafness was found in the examination of 167 pupils, compared with 6 out of 120 in 1895.

For purposes of comparison of heights and weights the average was taken at different ages of girls in schools of all classes, as obtained by Professor Bowditch in Boston. These were set out in tables, and the number above and below the average given at the different ages. In order to compare the heights and weights of children in 1895 with those of to-day, Dr. Alexander has made a survey of 147 girls, and the result of this is given in the following tables at different ages:—

HEIGHT.

Age.	BOSTON GIRLS. 1895. Average Height.	BIRMINGHAM GIRLS.			Above Average.	Percentage above.
		Below Average.	Average.			
14	59.94 ins.	1895	... 17	33	or	66%
		1925	... 1	9	or	90%
15	61.10 ins.	1895	... 28	29	or	50.8%
		1925	... 2	5	or	71.1%
16	61.59 ins.	1895	... 24	29	or	54.7%
		1925	... 2	12	or	85.7%
17	61.92 ins.	1895	... 8	14	or	63.6%
		1925	... 13	51	or	79.6%
18	61.95 ins.	1895	... 5	8	or	61.5%
		1925	... 4	26	or	86.6%

It will be seen that the percentage of pupils whose height is above the average has improved at all ages since 1895.

Age.	BOSTON GIRLS. Average Weight.	BIRMINGHAM GIRLS.			Above Average.	Percentage above.
		Below	Average.			
14	7st.	1895	... 31	19	or	38%
		1925	... 5	5	or	50%
15	7st. 8lbs.	1895	... 35	19	or	35.1%
		1925	... 4	3	or	42.8%
16	8st.	1895	... 38	15	or	28.3%
		1925	... 5	9	or	64.2%
17	8st. 3lbs.	1895	... 12	10	or	31.2%
		1925	... 26	38	or	59.5%
18	8st. 3lbs.	1895	... 10	3	or	23%
		1925	... 17	13	or	43.3%

\*Windle and Manners Smith, "On the Physical Characters of a Group of Birmingham Pupil Teachers." Proc. B'gham. Philosoph. Soc., 1895. Vol. IX. Pt. ii.

The percentage above the average weight shows a distinct increase over that of 1895. This goes to prove that the general physique of the pupil teacher at the present time is of a much higher standard than it was 30 years ago. The lesser defects included deformities and skin diseases. The former are becoming much more rare, a fact which may reasonably be claimed to be due to the continuous supervision at physical culture classes.

### JUVENILE EMPLOYMENT AND WELFARE.

An increasingly close association is being established year by year between the Medical Department and that of Juvenile Employment and Welfare. Children on leaving school, whose medical history has indicated some defect which may affect their careers in industry, and young persons who appear to need medical attention are brought up for special examination by me. I have during the year examined 150 such cases, for such diverse conditions as Epilepsy, Enlarged Tonsils, Tuberculosis, Anaemia, Encephalitis, Goitre, etc. In several cases of the last mentioned condition arrangements have been made for operation, which has been successfully performed at the General Hospital. I have in addition examined a certain number of boys for admission to Sea-training Schools and for Emigration.

### INFECTIOUS DISEASE.

The accompanying table supplied by the Health Department gives the incidence of the chief notifiable infectious diseases at all ages during the year, compared with that of previous years. It will be seen that while Scarlet Fever has shewn a progressive decrease during the last four years the incidence of Diphtheria has continued to shew the yearly increase which was commented upon in my report for the year 1924.

	1922	1923	1924	1925
Scarlet Fever ... ... ... 3,250	2,619	2,219	1,862	
Diphtheria ... ... ... 1,285	1,537	1,887	1,981	
Cerebro-spinal Meningitis ... ... 18	4	12	9	
Anterior Poliomyelitis ... ... 6	33	40	13	
Encephalitis Lethargica ... ... 12	29	296	93	
Ophthalmia Neonatorum ... ... 484	433	413	335	

### *Encephalitis Lethargica.*

The first half of the year 1924 was marked by a wide-spread epidemic of this infection, the tragic after-effects of which showed themselves in the year under review. This epidemic fell with special severity upon the children of school age in the City. Although the deep lethargy which characterised the earlier cases of this apparently new disease (it was first described in 1917) was sometimes present, yet the acute stages of the infection were often so indefinite that a large number were not recognised as such until the later physical and mental manifestations gave a clue to the real nature of the malady. Hence the number of cases notified to the Medical Officer of Health fell very short of the actual numbers infected. During 1924, 60 children were thus notified, but, in the course of last year, 40 additional and unnotified children were presented to me from different sources for examination on account of the later sequelæ, in whom the initial symptoms had escaped recognition at the acute stage of the infection, but whose history and present condition gave clear and unequivocal evidence of an attack of Encephalitis.

In a paper read in 1921 I drew attention to the frequency with which certain moral changes are found in children to supervene upon an attack of Encephalitis, more especially in the direction of persistent thieving and lying. Since that date similar changes have been described both in Europe and America. These and other aberrations of conduct are so constant in their association that they give a characteristic picture of a condition which appears to bear a definite relationship to certain types of mental disorder, and to raise points of profound psychological importance, especially in relation to that type of persistent anti-social action to which the term "moral imbecile" has been applied. But, apart from actual delinquency, there are other features of behaviour, e.g., a spitefulness and disobedience, a noisy restlessness and excitability at night, accompanied by singing, whistling and talking, and the persistence of certain perverse habits, such as tearing their clothes and bedclothes to pieces, which, in the overcrowded homes from which many of these children come, make them a positive curse to the over-burdened parents. It is the disturbance of the normal sleep-wake rhythm which is the most characteristic, as it is the most intractable, after-effect. The children remain awake throughout the night, and fall asleep as morning breaks, and then cannot be roused till towards the afternoon. The following table summarises the result of the examination of 69 children, the notes of which are sufficiently full to rank for tabulation. (Where no specific note has been made the condition has been counted as normal).

It must, of course, be kept in mind, in connection with the relative numbers and percentages given, that many of the children were presented to me on account of the prominence of certain symptoms, character-changes, etc., so that the figures are to some extent loaded.

Intelligence reduced	...	...	30	Normal or unknown	39	43·4%
Disturbed sleep rhythm	...	...	55	" "	14	79·7%
Marked irritability	...	...	49	" "	20	71·0%
Character changes and moral defects	21			" "	48	30·4%
Parkinsonism, tremors, brady-						
kinesis, etc.	...	...	30	—		43·4%
Perverted habits	...	...	32	—		46·3%

Present state { Improving or stationary ... 56  
                  Deteriorating     ...     13 } Total 69.

It will thus be seen that in 79·7 per cent. of the cases, most of which were examined from nine to twelve months after the acute stage of the disease, there was persistent disturbance of the normal sleep rhythm. It is not, however, the sleepiness by day which is the most distressing feature of this disturbance, but the noisy irresponsibility which destroys the rest of the whole household. "Sings and whistles the whole night." "Keeps the whole house awake singing and shouting." "In and out of bed all the time." "Cries all night and sleeps all day." "As it gets dark you can't do nothing with him—anything for mischief." "If he makes the others cry, so much the better." "Goes raving mad at night, absolutely raving—gets out of bed and walks round the room and rubs his head." "Whispers all night, gets out of bed, claps her hands, and sings till five in the morning. She's very nervous. It's shocking; she hears a pin drop at night." "Chatters to herself like as if she's fair silly." These are some of the verbatim reports by mothers. In other cases the excitement takes the form of impish tricks. One boy used to get up at night and break the crockery, and, on one occasion, locked his father out of the house till 3 a.m. Another very characteristic feature is

the tearing of the bed linen and clothes : " Tears everything up." " Rips his clothes to pieces." " Tears his shirt to pieces and ties them in knots." This form of destructiveness is noted in nine of my series. The irritability takes various forms, from a mere quick resentment of criticism to sudden and violent outbursts of temper and spitefulness, which make them a potential menace to the safety of other members of the household ; as may be gathered from the following sample statements :—" It isn't safe to leave her ; she got a knife to her little brother and said she would cut his heart out." " Awful irritable with the other children." " Sets about his younger brother—he's got such a grip on him, we're afraid of him." " Spiteful to her sisters ; she used to be such a nice girl, now she's quite changed." " He's got a vile temper now, and it is more than I can manage." None of the series has at present come before the Children's Court, but in six cases there is a history of thieving.

Twenty-nine children gave evidence of some reduction in intellectual capacity since their illness. - It must, however, be remembered that so much absence from school is often entailed by the onset of Parkinsonism, the diurnal drowsiness, or the intractability in school, that too much dependence must not be placed on these figures. In none of the cases examined was any profound reduction evident, and the disorder of behaviour was out of all proportion to the intellectual impairment.

In not a few instances the harmony of the home and the amicable relations with the neighbours have been completely destroyed by the presence of one of these children, and the position is often pitiable.

From the above reports it will be recognised that the provision of some form of institution which will supply prolonged convalescent treatment, savoured by the discipline which is necessary for their re-education in social conduct, is one of the most pressing needs of the time. To leave them in their present surroundings is only likely to lead to a fixation of an antisocial attitude with its high probability of a future career of misdemeanour, vagrancy and crime. To which public body belongs the responsibility of making provision for these cases is not easy to decide. The intellectual capacity is but rarely reduced to such an extent as to warrant their certification under the Elementary Education (Defective and Epileptic Children) Act, yet to exclude them altogether from school on account of their unruly behaviour is to deprive them of the advantage of the only form of discipline which is so essential to them. Neither is it generally advisable to certify them under the Mental Deficiency Act, though the Board of Control is now prepared to accept cases up to the age of sixteen as coming within the definition in that Act (Section 1) of existence of mental defect " from an early age." Moreover, the presumption of the permanency of the defect which forms part of this statutory definition does not appear to fit in with our experience of the prognosis in these cases. Even if they are so certified it is in the highest degree unsatisfactory to mix such children with others whose intellectual capacity is so much inferior to their own. Some parents in despair have had their children certified under the Lunacy Act, but an Asylum is the worst possible place for these children, for there can be no provision of suitable training or continued education. A readier method of procedure appears to be under the Poor Law. The Local Government Board (Mentally-Defective Persons) Order of December, 1911, defines the cases which may be conveniently dealt with under that order as persons under 21 years of age " who by reason of mental defect . . . . cannot be trained in association with other persons in ordinary schools or institutions. . . ." Here the sole criterion is the parental inability to supply the necessary

protection and control, coupled with an unsuitability for an ordinary school or institution. This means of disposal appears to be the most satisfactory for the more intractable types of children. From the experience of the past year, institutions, specially provided for these cases, appear to be the only satisfactory solution. I estimate that there are in the City from fifteen to twenty children for whom such provision should be made.

### TUBERCULOSIS.

The accompanying table shows the incidence of notified Tuberculosis in children of school age, and the different parts of the body infected:—

TUBERCULOSIS (ALL FORMS) 1925.

Ages.	Pulmonary.		Tubercular Meningitis.		Peritoneum and Intestines.		Spinal Column.		Joints.		Other Organs		Disseminated.	
	Cases Notified.	Deaths.	Cases Notified.	Deaths.	Cases Notified.	Deaths.	Cases Notified.	Deaths.	Cases Notified.	Deaths.	Cases Notified.	Deaths.	Cases Notified.	Deaths.
0	2	3	4	11	5	4	1	1	1	1	1	1	1	2
1	5	8	6	14	7	2	1	1	2	1	6	—	3	1
2	3	1	8	9	6	—	2	1	1	—	1	—	—	1
3	5	5	4	5	3	1	3	—	2	—	3	—	2	1
4	8	1	3	9	1	—	1	—	2	—	6	—	3	—
5-9	81	4	9	16	9	3	4	—	14	—	36	—	5	2
10-14	97	19	4	4	4	2	3	2	5	1	19	1	3	3
Total ...	201	41	38	68	35	12	13	3	26	1	71	1	16	10

Dr. Dixon, Chief Tuberculosis Officer, has supplied the following information concerning children admitted to the Sanatorium:—

“ During the year 1925 the number of children treated at Yardley Road Sanatorium was 248. Of these 114 were males and 134 were females. Out of the 248 there were 119 who were admitted primarily for observation, of which 83 were discharged with no definite signs of active Tuberculosis.

“ There were 165 who remained for treatment, 35 being in stage 1 (Turban-Gerhardt\*), 58 were in stage 2, and 42 were in stage 3. There were 25 children suffering from non-pulmonary disease.

“ The average length of time spent by those children who were discharged during the year was 30 weeks.”

\*The four degrees in the Turban Gerhardt classification of pulmonary tuberculosis infection are as follows:—

- Stage I. Comprises those with disease of slight severity limited to small areas on either side, which in the case of affection of both apices does not extend below the scapular spine or clavicle, or in the case of an affection of the apex of one lung, does not extend below the second rib in front.
- Stage II. Comprises those with disease of slight severity more extensive than Stage I., affecting at most the whole of one lung, or severe disease extending at most to the half of one lung.
- Stage III. All cases of greater severity than Stage II., and all those with considerable cavities.
- Stage IV. Includes those cases where no disease can be found or where the lesion is definitely proved to be obsolete.

## DEATHS IN CHILDREN OF SCHOOL AGE.

The accompanying table shows the causes of death in children between the ages of five and fifteen during the year. The actual number of deaths is somewhat larger, but this increase must be correlated with the fact that there has been a definite increase in the number of children in this age-group. The approximate number of the population in this age-group has been calculated for statistical purposes as 183,490, as against 180,830 in 1924. The approximate death rate for the age period five to ten was 2·2, and for the period ten to fifteen was 1·5, as against 1·9 and 1·3 respectively in 1924.

CAUSES OF DEATH	CHILDREN 5-15.	1918	1919	1920	1921	1922	1923	1924	1925
Measles ...	...	8	24	19	11	5	13	5	9
Scarlet Fever ...	...	7	24	40	16	11	18	7	7
Whooping Cough	...	10	3	8	5	7	0	2	4
Diphtheria	...	87	63	95	64	49	60	51	39
Influenza	...	223	42	25	2	6	6	8	10
Pulmonary Tuberculosis	...	52	31	26	25	22	24	17	23
Tuberculosis Meningitis	...	20	19	9	15	15	13	12	20
,, Peritonitis & Intestines	...	9	16	5	6	7	6	3	5
Other Tuberculous Diseases	...	21	17	17	7	7	12	4	9
Rheumatic Fever	...	10	9	17	8	14	13	17	22
Cerebro-Spinal Fever...	...	4	2	3	0	3	0	0	0
Meningitis...	...	20	13	11	13	6	10	6	9
Organic Heart Diseases	...	27	28	21	23	22	19	17	16
Bronchitis	...	10	11	5	3	4	5	0	4
Pneumonia	...	91	56	49	46	36	31	25	31
Appendicitis	...	16	25	20	20	15	13	14	13
Accidental Burning	...	18	10	10	6	1	5	4	9
Accidental Drowning	...	10	11	13	5	3	7	4	6
Other Accidents	...	29	23	20	18	20	20	17	25
All Other Causes	...	86	99	108	81	83	94	87	79
<b>TOTAL ...</b>	...	<b>758</b>	<b>526</b>	<b>521</b>	<b>374</b>	<b>336</b>	<b>369</b>	<b>300</b>	<b>340</b>

## CONCLUSION.

The submission of this report on the work of the School Medical Service is an appropriate occasion for acknowledging the help which is forthcoming from various sources. In particular may be mentioned the assistance rendered by the Teachers and the School Attendance Officers. The medical and dental inspections in the schools involve a considerable amount of preparatory labour on the part of the Teachers, and the smooth conduct of the inspections depends very largely upon the efficacy of the arrangements made by the Head Teachers and their staffs. The Medical and Dental Officers find that the Teachers are always ready to co-operate and help.

The School Attendance Officers also contribute their share to the success of the work by " following up " absentees from the Clinics, making special enquiries, and bringing to the notice of the Medical Department children seeming to need particular care and attention. The knowledge which the Teachers and Attendance Officers have of the home circumstances of many of the children is often of considerable value in an attempt to bring about an improvement of their physical welfare.

Teachers, School Attendance Officers, and Medical and Dental Staffs can be mutually helpful, and I am happy to record that the Medical Department is assisted to the full in its care of the health of school children.

**SPECIAL SCHOOLS SUB-COMMITTEE, 1924-25.**

Councillor Miss C. MARTINEAU, J.P. (*Chairman*).  
 Mr. Councillor W. BYNG KENRICK (*Ex-Officio*).  
 Mr. Alderman A. R. JEPHCOTT, M.P.  
 Councillor Dr. W. B. FEATHERSTONE, J.P.  
 Mr. Councillor G. F. GODRICH.  
 Mr. Councillor G. PAYNE.  
 Mr. Councillor W. E. SMITH.  
 Mr. A. CLENDON, M.A.  
 Miss E. M. BARLING, M.B.E.  
 Mrs. WALTER BARROW.  
 Mrs. BARROW CADBURY, J.P.  
 Miss M. H. S. POLLACK.

**Chief Education Officer.**

P. D. INNES, M.A., D.Sc.

**Clerk to Sub-Committee:**

H. B. NEWSOME.

**Superintendent of Special Schools:**

MARION F. BRIDIE, L.L.A. (Resigned, August, 1925).  
 ELIZABETH L. S. ROSS, M.A., B.Ed. (Appointed Sept., 1925).

**Special Schools Medical Officer:**

ARTHUR P. THOMSON, M.C., M.D., M.R.C.P.

**Special Schools Assistant Medical Officer:**

JAMES M. SMELLIE, M.D., M.R.C.P.

**Ophthalmic Surgeon:**

R. BEATSON HIRD, F.R.C.S.

**Visiting Medical Officers:**

*Baskerville School* : FREDK. B. WINFIELD, O.B.E., M.R.C.S., M.R.C.P.

*Croftwood School* : MITCHELL I. DICK, M.B., Ch.B.

## SPECIAL SCHOOLS.

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ANNUAL REPORT OF THE SPECIAL SCHOOLS MEDICAL  
OFFICER, A. P. THOMSON, M.C., M.D., M.R.C.P., FOR  
THE YEAR ENDED 31ST DECEMBER, 1925.

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### MEDICAL INSPECTION AND TREATMENT.

The routine medical inspection of children in attendance at the Special Schools has been conducted on the customary lines throughout the past year. The total number of children so inspected, including "specials" put forward by the teachers or nurses, was 635.

Full use has continued to be made of the School Clinics for children requiring such treatment as is available there. In addition, an appreciable number of children have been dealt with by Dr. Smellie or myself at the Out-Patient Departments of the Children's and General Hospitals.

### SCHOOLS FOR THE MENTALLY-DEFECTIVE.

#### *Admission Examinations.*

As usual, the examinations for admission to the Special Schools for the Mentally-Defective have been held at the Special Schools, although a relatively small number of children have also been seen for this purpose at the Education Office.

The results of these examinations during the past year were as follow :—

Number of children examined	...	...	...	...	521
Number certified as mentally-defective	...	...	...	...	360
Number to remain at Ordinary Schools	...	...	...	...	105
Number temporarily excluded from school attendance	...	...	...	...	30
Number certified as ineducable	...	...	...	...	26

There is still very heavy pressure on the accommodation at some of the Special Schools, notably at Burlington Street, George Street West and Little Green Lane. I show below the number of children reported as probably mentally-defective from the ordinary schools in the vicinity who were awaiting examination at December 31st with a view to admission to these schools :—

From Schools in the Burlington Street district	...	...	86
"      "      "      George Street West district	...	...	107
"      "      "      Little Green Lane district	...	...	85

It follows that, apart from a few exceptional cases, children in these districts have to wait more than two years from the time they are "nominated" until they can be received at the Special School they should attend, assuming them to be certified as mentally-defective on examination.

Proposals are, I understand, being put forward by the Special Schools Sub-Committee for the formation of an additional class at the Burlington Street Special School, and for the erection in the near future of a new school for mentally-defective children at Handsworth, which would relieve the pressure both at Burlington Street and George Street West.

The increase in the number of children reported as mentally-defective from the Burlington Street district since the establishment of the Special School there three years ago has been most marked. It indicates that "ascertainment" is likely to be more complete where Special School facilities exist.

#### *Periodical Examinations.*

These examinations are conducted, one each term, at all the Special Schools.

The following is a statement of the decisions arrived at during the past year :—

Children allowed to leave between the ages of 14 and 16 subject to satisfactory Employment	...	...	...	...	114*
Children reported to the Local M.D. Act Committee as needing institutional care or guardianship on leaving the Special Schools at 16	...	...	...	...	18
Children transferred to Ordinary Schools	...	...	...	...	3
Child transferred to a School for the physically-defective	...	...	...	...	1
Children excluded and reported to Local M.D. Act Committee as unable to benefit further from Special School instruction	...	...	...	...	57

\* 3 children decertified as not mentally-defective.

### SCHOOLS FOR THE PHYSICALLY-DEFECTIVE.

#### *Admission Examinations.*

The admission examinations for the Schools for the Physically-Defective are, unlike those for the Schools for the Mentally-Defective, held at the Education Office. The children are examined almost immediately after being reported by the School Attendance Officers, Head Teachers, Medical Practitioners, or parents.

Below is a summary of the results of these examinations in 1925 :—

Number of children examined	...	...	...	...	178
Number certified for admission to the Day Schools for the Physically-Defective	...	...	...	...	60
Number certified for admission to the Baskerville Residential Physically-Defective School	...	...	...	...	32
Number able to attend Ordinary Schools	...	...	...	...	17
Number certified as temporarily unfit for school	...	...	...	...	68
Number certified as permanently unfit for school	...	...	...	...	1

#### *Periodical Examinations.*

The decisions made at the terminal examinations held at the two Day Schools for the Physically-Defective were as follow :—

Children allowed to leave between the ages of 14 and 16	...	18
Children transferred to Ordinary Schools	...	17
Child transferred to School for the Mentally-Defective	...	1
Children transferred to Uffculme Open-Air School	...	6
Children permanently excluded as ineducable mentally	...	7
Children permanently excluded as physically unfit for school	...	2

### BASKERVILLE RESIDENTIAL SCHOOL.

The number of girls who were admitted to this school during the year was 31, and the number who left was 39.

The following details are given with regard to the latter :—

Children allowed to leave at 14 years of age	...	...	...	10
Children transferred to Ordinary Schools	...	...	...	15
Children transferred to Day Schools for the Physically-Defective				5
Child transferred to Uffculme Open-air School	...	...	...	1
Child transferred to another Residential Physically-Defective School	...	...	...	1
Children excluded as temporarily unfit for school	...	...	...	3
Children who left for miscellaneous reasons	...	...	...	4

The extension for boys at this school is now in course of erection, and it is hoped that it will be available for occupation immediately after the summer holidays.

At this stage I feel it is desirable to present a general report on the problem of rheumatic infection in children.

#### *Definition.*

By "rheumatism" throughout this report is meant that condition of infection which predisposes a child to heart disease, and whose chief manifestations in Birmingham are :—(1) Sore throat; (2) vague, inconstant pains in the limbs and trunk which are commonly known as "growing pains," and (3) Chorea, or St. Vitus' dance. It is most important that this disease should not be confused with any of the chronic "so-called 'rheumatic' ailments of the adult," such as chronic arthritis and myalgia. Acute rheumatic fever of the adult and rheumatism in the child are almost certainly due to the same infection, and it is a curious and important fact that manifestations in the young are much the less striking.

#### *Incidence of the Disease.*

Rheumatism is not a notifiable disease and inasmuch as the symptoms are frequently indefinite, and as diagnosis is often a matter of opinion, it is impossible to give any accurate estimate of the total number of children infected in the City. Some indication of its ravages, however, may be obtained from a consideration of the numbers of school children who suffer from heart disease, as in early life no other cause of cardiac affections compares in any way in importance with rheumatism. In 1921, Sir George Newman in "The Health of the School Child," reported that about 0·8 per cent. of the children of the country had organic heart disease. This almost certainly under-estimates the total number, for the early signs of heart disease are slight, and the conditions of medical inspection do not permit of exhaustive examination of the individual child. In Birmingham, Dr. Auden (report for year ended December, 1913) found that of the total school population 1·5 per cent. had acquired heart disease; my impression is that this more accurately represents the position for this City, and there are probably at least 2,000 children with damaged hearts in our Elementary Schools. In New York the percentage of affected children is found to be 2 per cent.

In the investigation of statistics of the School Medical Service a further point of great importance emerges, and that is the fact that the proportion of children affected is much greater in the later age groups

examined than it is in the entrance groups—in other words, it is clear that a large number of children actually acquire heart disease while they are attending the Elementary Schools. In this connection it is interesting to find that the percentage of children found to be affected with heart disease in the schools of New York is exactly the same as the total percentage of rejections of young adult lives, for life insurance, on account of the same disease. This suggests very strongly that the serious forms of heart disease are acquired during the school age, for it is known that it is comparatively rare for heart disease to develop for the first time later in life.

#### *Importance of the Condition.*

The importance of the subject of rheumatic infection in children has not yet been sufficiently realised. Briefly, it may be said to imply two serious consequences for the affected child. The first is that there is commonly a great loss of normal school life; as Dr. Auden has frequently pointed out in his reports, the rheumatic infection is one of the great causes of prolonged periods of absence from school. On this matter there is substantial agreement among all School Medical Officers. The second serious consequence of the rheumatic infection is the liability to heart disease that is associated with it.

It is, as yet, impossible to say what proportion of rheumatic children ultimately develop heart affections, but investigation showed that in a large proportion of patients who died of heart disease the origin of the fatal illness was undoubtedly rheumatism. Dr. G. A. Allan, in Glasgow, analysed a series of 320 deaths from heart disease of all types which took place in the wards of the Western Infirmary for Glasgow, and he found that of these 46 per cent. were certainly due to rheumatic infection, although, quite possibly, the figure should have stood nearer 60 per cent. I have analysed a similar series (but it is not quite so large) at the General Hospital, in Birmingham, and I found that the proportion directly attributable to rheumatism to be 52 per cent. It may be taken as established, therefore, that half the deaths occurring in this country from heart disease are due to rheumatic infection, and, as I have already shown, there is strong presumptive probability that the foundation of the disease is laid in school life.

Heart disease is one of the great killing diseases of the country. The Registrar-General's return for 1924 gives the following figures:—Total deaths from tuberculosis, 41,103; from cancer, 50,389; from heart disease, 60,650 (excluding diseases of blood vessels). It is, therefore, probable that 30,000 deaths a year occur in the country as a direct result of rheumatic infection. These mortality figures, serious enough as they are, do not tell the whole story of the ravages of this disease. Patients with rheumatic hearts usually pass through a period of some years of gradually increasing distress and suffering before they die; and they are peculiarly prone to break down at times associated with physiological strain; for instance, in women pregnancy and child-birth quite often cause the first serious symptoms of heart failure, and it is unfortunately true that a large number of sufferers from heart disease are first made aware of the crippling that it involves at a time when it is particularly desirable that they should exercise full activity. It is difficult to exaggerate the amount of social distress and worry that results in a working-class home, for example, when the mother of young children begins to show signs of heart failure, and for some years before her death is unable to care for her home properly. The mere cost of provision of hospital and other medical treatment for these patients is a serious matter.

*Cause of the Disease.*

It is generally agreed that rheumatism in the child is an infective disease; that is, a disease due to a micro-organism, but there is very little evidence that the infection is spread by direct contact between children, though this possibility cannot be entirely excluded. I do not propose to enter here into any discussion of the exact cause of the disease, but I think it is fair to say that, more and more, opinion is tending to the view that the disease is caused by a variety of the germ known as the streptococcus. I have done some work in this connection, with Dr. Ash, at the University, and we have succeeded in isolating several varieties of streptococcus from the children at Baskerville, but so far we have not succeeded in producing rheumatism, or anything resembling it, in the animals upon which we have experimented. This work is still progressing. To my mind our failure to produce any rheumatic symptoms in animals is probably due to the absence of what is known as a "specific factor." This is hypothetical and highly controversial.

In the absence of clear knowledge of the cause of the disease, I have devoted considerable time to an endeavour to estimate the importance of other predisposing factors.

It is known that rheumatic infection is largely a disease of temperate climates and that it tends to have a seasonal incidence. Girls appear to be more liable to it than boys, and it has been said that those of Nordic type are more prone to it. Of the truth of the suggestion I am not satisfied, for the children that have been admitted to Baskerville seem to me to be of diverse racial types.

The first concrete fact in dealing with the predisposing causes of rheumatic infection in childhood is that it is unquestionably a disease of poverty. It is very rare, comparatively, to see children with serious rheumatic infection in the middle and upper classes of the community, and enquiry has shown that oddly enough it is most common among the decent poor rather than among the destitute. Sir John Robertson has very kindly put the services of some of his Health Visitors at my disposal to investigate this matter, and we are able to confirm it as far as Birmingham is concerned. It is remarkable that in nearly 100 reports on the homes of rheumatic children obtained for me by this means there is not one which suggests neglect on the part of the parents, and in over 80 per cent. the visitors reported that the general care of the children in the home was unusually good. I desire once again to emphasize the fact that these children come of a stock that is well worth saving.

During the past three years I have had a spot map prepared of cases of rheumatic infection in children which have been reported to me from various reliable sources, or which I have myself seen. For this purpose the figures at the General Hospital, the Children's Hospital, my own private practice, as well as figures of the School Medical Service, have been used, and I think the map may be taken to represent very fairly the incidence of rheumatism in the City. The striking factor emerges from it that the vast majority of our cases occur in houses scattered along the south side of Hockley Brook and the River Rea. This result supports very strongly the view that dampness and low lying ground favour the development of rheumatic infection. In a considerable number of houses visited it was reported to me that 45 per cent. of them showed definite dampness, either of the walls or of the floors. In the course of the same enquiry it was found that the orientation of the house and its manner of ventilation appeared to be of very little importance.

It has been stated that a tendency to rheumatism is inherited, but my investigations do not confirm this. In my cases I found that 25 per cent. of the children had a definite and well marked history of true rheumatic disease in a near relative, and that if the doubtful but probable cases were included the total rose to 31 per cent.; with the same group of children, however, I found that the family incidence of tuberculosis was almost exactly the same, and I do not think my figures lend any support to the view that the disease, or any tendency to it, is inherited.

#### *Nature of the Disease.*

The outstanding characteristic of the rheumatic infection in childhood is that it is a smouldering disease. Commonly the child is a little below the average in nutrition and energy for its age, and every now and then there is a little febrile disturbance which may be associated with any or all of the commoner rheumatic manifestations, *i.e.*, sore throat, limb pains, or chorea. At any time, apparently, during this smouldering period of infection, the heart may become infected and if that infection is allowed to remain untreated permanent damage is soon done. Occasionally the rheumatic infection breaks out violently without previous warning and in severe attacks of this kind the heart may be infected and permanently damaged almost immediately, but the majority of cases of heart disease in children begin in the stealthy way that I have indicated.

#### *The Problems Involved.*

I have sketched some of the chief features of this disease in order to make it clear that there are two problems intimately associated. The first, and probably the more important, is the prevention of rheumatic infection altogether; in the present state of our knowledge no more can be done than to eliminate dampness from houses and to make provision for the drying of the wet clothing of children when they arrive at school. The second problem, with which I am immediately concerned, is that of the treatment of the infected children, and, as the Committee are well aware, this has been the main object of the work at Baskerville. At an early stage it was found that with good general hygiene, rheumatic children improved very remarkably at Baskerville, particularly if suitable precautions were taken as regards graduated rest and exercise, and it was not long before the Head Mistress and I both realised that suitable education might be made a very valuable curative measure for them. It is notorious that rheumatic children, on the whole, do not do well when they are compelled to attend ordinary Elementary Schools. As a result of their disease they are nervous and highly strung, and the competitive life of ordinary schools very soon produces a further breakdown, and it was, therefore, with some surprise that Miss Smith found that the children who were trained on a modified Dalton plan progressed at Baskerville more rapidly than those who were allowed to lie fallow.

I do not propose to enter here into details of the education and control of these rheumatic children, but Miss Smith and I hope to make it the subject of a separate communication shortly.

Owing to the fact that rheumatic infection, as a whole, was more prevalent in places whose supply of sunlight was restricted, I instituted ultra-violet light at Baskerville some three and a half years ago, and in the application of it, and, indeed, for the very generous loan of a lamp we are indebted equally to Dr. Clyde McKenzie, of Smethwick, and Mr. King, of Langley. Miss Smith and I are both satisfied that ultra-violet light has an excellent tonic effect on these children, but I can produce no definite evidence that it is in any way specific treatment for the infection. The influence of various drugs has been studied, with no very positive result, but our investigations are still in progress.

*The Influence of Tonsilectomy.*

Despite all these measures for the care and control of these children at Baskerville, I nevertheless found that a considerable proportion of them still developed slight febrile illnesses while actually in residence at the school and that although their general health had improved very considerably I was unable to feel that we had rescued them from the serious possibility of heart disease when they were discharged. In the search for the source of this constant reinfection I was able to distinguish two groups of children; one in which the febrile attacks were few and relatively insignificant, and the other in which they were more pronounced, and it may briefly be said that I found that those children from whom the tonsils had, at an early stage, been efficiently removed, made far better progress than those in whom the tonsils remained and, eventually, I was able to show that in my experience it was extremely rare for a rheumatic child to develop serious and permanent carditis after efficient tonsilectomy. This conclusion was entirely contrary to my expectations, and, up to now, has certainly not received much support in medical literature, but rather a good deal of destructive criticism. However, the matter has been re-investigated during the past year from this angle by Dr. Reginald Miller, on behalf of the Cardiac Research Sub-Committee of the British Medical Association, and I have recently received his preliminary report in which he states that he has come to exactly the same conclusion—that tonsilectomy, though it will not protect a child from subsequent manifestations of rheumatism, does, in some manner which we do not yet know, protect the heart from serious and permanent damage.

I have already pointed out that the overwhelmingly important consequence of rheumatic infection is heart disease, and if it can be prevented by the comparatively simple measure of efficient tonsilectomy I feel that some arrangement should be made by which this method of prophylaxis should be employed as widely as possible. At first sight it might appear that all that is necessary is to take steps to secure that rheumatic school children should be sent to the Clinic for tonsilectomy as soon as possible, but there are two considerations which render such a course inadvisable.

In the first place these children are already delicate, a proportion of them have infected hearts, and the Clinic cannot provide sufficient facilities for the care of them after the operation. As the result of experience at Baskerville we have found that they may require careful supervision for a month or six weeks after tonsilectomy, and that providing this is available no serious ill effects result from the operation. Dr. Reginald Miller is again in agreement with me that with suitable precautions the procedure is harmless.

In the second place, the operation required for these rheumatic cases is often somewhat more elaborate than that usually carried out at the Clinic, and takes a longer time to perform.

With these considerations in view, it is clear that some special arrangements should be made for tonsilectomy in this type of child, and I hope that a suitable scheme will shortly be evolved.

A preliminary review of the results of the provision of special educational and other treatment for rheumatic children at Baskerville is distinctly encouraging, but it is as yet too early to attempt to evaluate them precisely.

## OPEN-AIR SCHOOLS.

*Uffculme Day School.*

The admissions at this school during the year numbered 133, and the leavers 135.

The table below shows the reasons for children ceasing attendance at the school :—

Children improved sufficiently to be transferred to Ordinary Schools ...	89
Children who left at 14 years of age ... ... ... ...	17
Children transferred to Cropwood Residential Open-Air School ...	3
Child transferred to a Residential Physically-Defective School ...	1
Children transferred to Schools for the Mentally-Defective ... ...	6
Children who left for miscellaneous reasons ... ... ... ...	19

The average length of time spent at the Uffculme School by the 89 children discharged to Ordinary Schools was 14 months. This period is the same as that recorded for children similarly discharged in the previous year.

The usual arrangements were made with very satisfactory results for a number of boys to sleep at the School on Monday to Thursday nights, from May until the end of September.

*Cropwood Residential School.*

The number of children admitted to this School during the year 1925 was 61, and the number who left was 49. The customary details are given with regard to the leavers, viz. :—

Children improved sufficiently to be transferred to Ordinary Schools ... ... ... ... ...	27
Children transferred to Uffculme Day (Open-Air) School ...	5
Children transferred to Schools for the Physically-Defective ...	2
Child transferred to a School for the Mentally-Defective ...	1
Children who left at 14 years of age ... ... ... ...	6
Children who left for miscellaneous reasons ... ... ... ...	8

The average stay of children at Cropwood prior to their transference back to Ordinary Elementary Schools was about 9 months.

*Open-Air School Accommodation.*

In my last year's report I expressed the opinion that the Committee should place in the forefront of their programme the provision of Day Open-Air Schools for children residing on the North side of the City. It is satisfactory to be able to say that proposals are in being for the acquirement of two sites, one in North-West and one in North-East Birmingham, when suitable opportunities offer, on which to erect schools of this type.

In this connection it may be of interest to give the following details disclosed by an examination of the records of the children who have passed through the Uffculme School during the last seven years (1919-1925) :—

Children discharged as fit to attend Ordinary Elementary Schools ... ... ... ... ...	555 = 74%
Children discharged at 14 years or over ... ... ...	113 = 15%
Children who left for miscellaneous reasons, such as change of address, unfit for attendance, lack of co-operation of parents ... ... ... ... ...	80 = 11%

It may be stated here that in order to test to what extent the improvement in health is maintained, the children are medically re-examined at intervals varying from about 3 to 12 months after leaving Uffculme. During the seven years mentioned above, 441 former pupils have undergone this examination, and 90 of them have been seen on two occasions. At these examinations the children were classified according to their existing state of health as under :—

			Seen from 3—6 months after leaving.	Seen from 9—13 months after leaving.
Very satisfactory ...	...	...	132 = 44%	100 = 43%
Satisfactory ...	...	...	75 = 25%	83 = 36%
Fairly satisfactory ...	...	...	53 = 17%	22 = 10%
Unsatisfactory ...	...	...	*41 = 14%	†25 = 11%
			<hr/> <b>301</b>	<hr/> <b>230</b>

\* Of these 25 were re-admitted to the School for a further period.

† Of these 12 were re-admitted to the School.

It will be seen from the above that of the children medically examined after having left the Open-Air School from 9 to 13 months, no less than 89 per cent. were regarded as generally satisfactory in health, and only 11 per cent. had definitely failed to maintain the improvement previously effected. It should be remembered that prior to their admission to the Open-Air School many of the children had been entirely absent from school for very lengthy periods or had only been able to attend intermittently. The gain derived therefore is not only to health and physique, but is an educational one also. There would appear, moreover, to be a definite financial advantage to the community inasmuch as these children are enabled to become regular wage-earners when their school days are over.

#### DAY CLASSES FOR THE PARTIALLY-BLIND.

The children who are classified as "partially-blind" continue to be provided for in the Special Classes held at Whitehead Road Aston, and at the Edgbaston Institution for the Blind. Considerable difficulty is experienced with the transit arrangements of young children living in the South and West districts of the City owing to the fact that the Managers of the Edgbaston Institution are unable to see their way to receive pupils under the age of 8 years. Consequently children below that age have to make daily journeys to the School in Whitehead Road from whichever part of the town they may reside in or else be placed at considerably increased cost as resident pupils at the Kindergarten Institution for the Blind at Harborne.

Mr. Beatson Hird, F.R.C.S., visits the Edgbaston and Whitehead Road Classes once each term.

He reports as follows concerning his work during the past year :—

"During the year 1925 the Partially-Blind Day Schools at the Blind Institute, Edgbaston, and at Whitehead Road, Aston, were each inspected three times, and the Medical records inspected and brought up to date. From the Edgbaston School 77 children were referred to the Central School Clinic, and examined by me. Of these 22 had new glasses prescribed. From Whitehead Road School, 89 children were referred to the Central School Clinic, and examined by me. Of these 15 had new glasses prescribed. Instruction was given as to the

methods of education to be employed in all the children, and a certain number of children were transferred to Ordinary Elementary Schools. I had the honour of being appointed a Member of a Special Committee serving under the Council of British Ophthalmologists to report on the methods adopted in various parts of the British Isles for the education of children suffering from defective vision, due to Myopia, or other causes (excluding the Blind). This report has now been published with certain recommendations. The chief of these are as follows :—

- “ 1. These Classes should be called ‘ Myope Classes,’ and not Partially-Blind Schools.
- “ 2. These Classes should be attached to Elementary Schools, where the children can have the advantage of mixing with normal sighted children, receiving oral and physical instruction with them.
- “ 3. The Classes should be limited to 25, as the pupils require considerable personal attention.

“ I hope we shall carry out these suggestions in Birmingham. We should require four or five such Classes situated conveniently in different parts of the City. Only the Blind, and those requiring similar methods of education, should be taught at the Blind Institute. By this the stigma attaching to so many children at present attending our Partially-Blind Schools would be removed, greatly to their advantage in after life.”

A Statement is given below showing the admissions and leavings at Whitehead Road and Edgbaston during the year :—

	Admitted	...	...	...	...	...	...	Edgbaston.	Whitehead Road.
<b>Left :—</b>								16	20
<b>Transferred to Ordinary Schools</b>									
Left at 14 or 15 years of age	...	...	...	...	...	...	3	16	16
Transferred to M.D. Schools	...	...	...	...	...	...	—	—	2
P.D. School	...	...	...	...	...	...	—	—	1
” Private School	...	...	...	...	...	...	—	—	1
” Edgbaston P.B. School	...	...	...	...	...	...	—	—	1
” Blind Institution	...	...	...	...	...	...	—	—	1
Admitted to Sanatorium	...	...	...	...	...	...	—	—	1
Transferred for Technical Instruction after 16 years of age	...	...	...	...	...	...	4	—	—
							23	30	

#### SUMMER SCHOOL.

The Summer School for children from the Special Schools was again held at Towyn in the same premises that were occupied in 1924. The weather was exceptionally good for practically the whole of the 16 weeks, and a very successful season's work was recorded. Eight groups, comprising altogether 192 children, were sent for the usual period of a fortnight, and all returned the better for the experience. Not only were the physical gains apparent, but the educational benefits have been repeatedly commented upon by the teachers of the Schools from which the children were drawn. As was reported last year, the premises are the most suitable that have been obtained since the Summer School was established some five years ago, but a lack of available space for the children's work

and recreation in wet weather presented difficulties. Fortunately the number of wet days was small. A solution might be found in the erection of a suitably designed shed. The health of the children was excellent during the whole time the school was in session.

The following table shows the dates between which the School was open, the Special Schools from which the children were drawn, and the average increase in weight per child :—

Dates.	Contributing Schools.	Children.	Sex.	Average gain in weight per child.
Apr. 29th—May 13th	George Street West, P.D.	24	Boys	lbs. ozs.
May 13th—May 27th	Gem Street, Deaf	24	Girls	3 3
May 27th—June 10th	Edgbaston and Whitehead Road, P.B.	24	Boys	0 11
June 10th—June 24th	Little Green Lane, M.D.	24	Girls	2 4
June 24th—July 8th ...	Little Green Lane, P.D.	24	Boys	1 7
July 8th—July 22nd ...	Sherbourne Road, M.D.	24	Girls	3 11
Aug. 26th—Sept. 9th	Burlington Street, M.D.	24	Girls	1 6
Sept. 9th—Sept. 23rd	Ralph Road, M.D.	*24	Girls	1 5
				1 8

\* Including 3 girls from Gem Street M.D. School.

It will be noticed that the crippled children gained most in weight and the deaf children least, the probable reason being that the latter were the most active group, while the movements of the former were necessarily restricted.

It may be remembered that in the preceding year the children in the groups that visited the School later when the weather was warmer increased in weight more than those that visited earlier. There was no similar evidence this year.

## CITY OF BIRMINGHAM.

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### EDUCATION COMMITTEE

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## Appendix to Annual Report

.. of ..

### School Medical Officer

*for the year ended 31st December, 1925.*

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### OFFICIAL TABLES.

## **ELEMENTARY SCHOOLS.**

TABLE I.—RETURN OF MEDICAL INSPECTIONS.

#### A. ROUTINE MEDICAL INSPECTIONS.

#### Number of Code Group Inspections:

### No. of other Routine Inspections

#### B. OTHER INSPECTIONS.

Number of Special Inspections	...	...	...	...	...	31,347
Number of Re-inspections	...	...	...	...	...	34,896
Total	...	...	...	...	...	66,243

TABLE II.

A. RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION IN THE YEAR END  
31ST DECEMBER, 1925.

Defect or Disease.		Routine Inspections.		Special Inspections.	
		No. of Defects.	Requiring treatment.	No. of Defects.	Requiring treatment.
(1)	(2)	(3)	(4)	(5)	
Malnutrition	... ...	135	290	89	7
Uncleanliness	... ...	179	1,221	844	518
(See Table IV., Group V.).					
Skin	Ringworm :				
	Scalp	20	1	506	61
	Body	29	—	455	2
	Scabies	20	2	251	1
	Impetigo	286	9	2,856	5
	Other Diseases (non-Tuberculous)	393	68	2,823	13
	Blepharitis	193	10	516	4
	Conjunctivitis	100	48	620	14
Eye	Keratitis	8	5	90	2
	Corneal Opacities	15	18	86	27
	Defective Vision (excluding Squint)	1,816	745	2,397	143
	Squint	577	169	396	24
Ear	Other Conditions	71	21	358	3
	Defective Hearing	355	33	492	16
	Otitis Media	319	15	1,023	8
Nose and Throat	Other Ear Diseases	142	12	402	3
	Enlarged Tonsils only	431	864	738	67
	Adenoids only	238	70	258	22
	Enlarged Tonsils and Adenoids	1,638	419	1,145	167
Enlarged Cervical Glands	Other Conditions	895	80	1,576	16
	Cervical Glands (Non-Tuberculous)	240	181	540	9
	Defective Speech	99	36	28	—
Teeth—Dental Diseases		5,638	18	345	—
(See Table IV., Group IV.).					
Heart and Circulation.	Heart Disease :				
	Organic	139	63	82	9
	Functional	27	55	37	11
	Anæmia	482	32	615	3
Lungs	Bronchitis	546	41	611	8
	Other Non-Tuberculous Diseases	116	112	226	13
Pulmonary :					
Tuberculosis.	Definite	4	1	21	3
	Suspected	29	18	37	13
	Non-pulmonary :				
	Glands	16	11	42	3
	Spine	3	3	6	—
	Hip	1	1	4	—
Nervous System.	Other Bones and Joints	7	4	11	3
	Skin	6	—	7	—
	Other Forms	1	5	20	3
	Epilepsy	22	13	52	22
Deformities	Chorea	70	32	169	7
	Other Conditions	52	63	74	23
Other Defects and Diseases	Rickets	301	177	28	3
	Spinal Curvature	140	59	26	13
	Other Forms	161	94	132	50

B. NUMBER OF *individual children* FOUND AT *Routine MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).*

Group. (1)	Number of Children.		Percentage of Children found to require treatment. (4)
	Inspected. (2)	Found to re- quire treatment. (3)	
<b>CODE GROUPS:</b>			
Entrants ...	15,606	3,961	25.38
Intermediates ...	10,760	2,765	25.69
Leavers ...	12,850	3,488	27.14
Total (code groups) ...	39,216	10,214	26.04
Other routine inspections ...	—	—	—

TABLE III.—RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA.

			Boys.	Girls.	Total.
Blind (including partially blind).	(i) Suitable for training in a School or Class for the totally blind.	Attending Certified Schools or Classes for the Blind ... Attending Public Elementary Schools ... At other Institutions ... At no School or Institution...	22 — 1 1	17 — 1 2	39 — 1 3
	(ii) Suitable for training in a School or Class for the partially blind	Attending Certified Schools or Classes for the Blind ... Attending Public Elementary Schools ... At other Institutions ... At no School or Institution...	66 — 1 4	67 — 2 6	133 — 3 10
Deaf (including deaf and dumb and partially deaf)	(i) Suitable for training in a School or Class for the totally deaf or deaf and dumb.	Attending Certified Schools or Classes for the Deaf ... Attending Public Elementary Schools ... At other Institutions ... At no School or Institution...	71 — — —	57 — — —	128 — — —
	(ii) Suitable for training in a School or Class for the partially deaf.	Attending Certified Schools or Classes for the Deaf ... Attending Public Elementary Schools ... At other Institutions ... At no School or Institution...	18 — — —	15 — — —	33 — — —
Mentally Defective.	Feeble-minded (cases not notifiable to the Local Control Authority).	Attending Certified Schools for Mentally Defective Children ... Attending Public Elementary Schools ... At other Institutions ... At no School or Institution...	644 33 — —	568 12 — —	1,212 45* — —
	Notified to the Local Control Authority during the year.	Feeble-minded ... Imbeciles ... Idiots ...	— 49 2	— 31 1	— 80 3
Epileptics	Suffering from severe epilepsy.	Attending Certified Special Schools for Epileptics ... In Institutions other than Certified Special Schools ... Attending Public Elementary Schools ... At no School or Institution...	12 — — —	6 — — 2	18 — — 2
	Suffering from epilepsy which is not severe.	Attending Public Elementary Schools ... At no School or Institution...	55 2	55 —	110 2

\* Certified as mentally-defective and awaiting admission to Special Schools. There are in addition 240 boys and 170 girls who have been reported as probably mentally-defective and who await examination.

TABLE III. *Contd*—RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA.

			Boys.	Girls.	Total.
Physically Defective	Infectious pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board ... ... ...	5	2	7
		At other Institutions ...	—	—	—
		At no School or Institution...	—	—	—
	Non-infectious but active pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board ... ... ...	68	38	106
		At Certified Residential Open Air Schools ... ...	10	—	10
		At Certified Day Open-Air Schools ... ... ...	11	8	19
		At Public Elementary Schools ...	2	1	3†
		At other Institutions ...	—	—	—
	Delicate children (e.g., pre — or latent tuberculosis, malnutrition, debility, anaemia, etc.).	At Certified Residential Open-Air Schools ... ...	70	—	70
		At Certified Day Open-Air Schools ... ... ...	62	54	116
		At Public Elementary Schools ...	7	6	13†
		At other Institutions ...	—	—	—
		At no School or Institution...	—	—	—
	Active non-pulmonary tuberculosis	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board ... ... ...	55	48	103
		At Public Elementary Schools ...	—	—	—
		At other Institutions ...	28	24	52
		At no School or Institution...	8	10	18
	Crippled Children (other than those with active tuberculosis disease), e.g., children suffering from paralysis, etc., and including those with severe heart disease.	At Certified Hospital Schools ... ... ...	6	5	11
		At Certified Residential Cripple Schools ... ...	—	47	47
		At Certified Day Cripple Schools ... ... ...	114	102	216
		At Public Elementary Schools ...	—	3	3
		At other Institutions ...	—	—	—
		At no School or Institution...	59	49	108

† Certified for, and awaiting admission to, Open Air Schools. There are in addition 69 boys and 77 girls who have been recommended for admission thereto and who await examination.

TABLE IV.—RETURN OF DEFECTS TREATED DURING THE  
YEAR ENDED 31ST DECEMBER, 1925.

TREATMENT TABLE.

*Group I.—Minor Ailments* (excluding Uncleanliness, for which see Group V.).

Disease or Defect.	Number of Defects treated, or under treatment during the year.		
	Under the Authority's Scheme.	Otherwise.	Total.
	(1)	(2)	(3)
<i>Skin—</i>			
Ringworm-Scalp ...	... ... ...	586	586
Ringworm-Body ...	... ... ...	405	405
Scabies ...	... ... ...	187	187
Impetigo ...	... ... ...	2,921	2,921
Other skin disease	... ... ...	1,508	1,508
<i>Minor Eye Defects</i>	.. ... ...	1,307	1,307
(External and other, but excluding cases falling in Group II.).			
<i>Minor Ear Defects</i>	... ... ...	1,771	1,771
<i>Miscellaneous</i>	... ... ...	5,003	5,003
(e.g., minor injuries, bruises, sores, chilblains, etc.).			
<b>Total</b>	<b>... ... ...</b>	<b>13,688</b>	<b>13,688</b>

TABLE IV. (*Contd.*)

*Group II.—Defective Vision and Squint* (excluding Minor Eye Defects treated as Minor Ailments—Group I.).

Defect or Disease. (1)	Under the Authority's Scheme. (2)	Number of defects dealt with			Total. (5)
		Submitted to refraction by private practi- tioner or at hospital, apart from the Authority's Scheme. (3)	Otherwise. (4)		
Errors of Refraction (including Squint but excluding operations for Squint).	3,778	No Information.	—	3,778	
Other Defect or Disease of the eyes (excluding those recorded in Group I.).	6	—	—	—	6
Total	... ...	3,784	—	—	3,784

Total number of children for whom spectacles were prescribed

- (a) Under the Authority's Scheme..... 3,540
- (b) Otherwise ..... —

Total number of children who obtained or received spectacles

- (a) Under the Authority's Scheme..... 3,466
- (b) Otherwise ..... —

*Group III.—Treatment of Defects of Nose and Throat.*

Number of Defects.				
Received Operative Treatment.			Received other forms of Treatment. (4)	Total number treated. (5)
Under the Authority's Scheme, in Clinic or Hos- pital. (1)	By Private Practitioner or Hospital, apart from the Authority's Scheme (2)	Total. (3)		
1,497	No information.	1,497	No information.	1,497

TABLE IV. (*Contd.*)*Group IV.—Dental Defects.*

(1) Number of Children who were :—

(a) Inspected by the Dentist :

Aged :

Routine Age Groups	5	19,182	Total 101,621
	6	13,900	
	7	14,115	
	8	16,346	
	9	16,533	
	10	16,945	
	11	1,606	
	12	1,423	
	13	1,343	
	14	208	
	Specials .....	3,483	
	Grand Total	105,104	

(b) Found to require treatment..... 74,736

(c) Actually treated ..... 32,257

(d) Re-treated during the year as the result of  
periodical examination ..... 11,570(2) Half-days devoted to  $\left\{ \begin{array}{l} \text{Inspection ... 396} \\ \text{Treatment...3,484} \end{array} \right\}$  Total 3,880

(3) Attendances made by children for treatment 36,829

(4) Fillings  $\left\{ \begin{array}{l} \text{Permanent teeth 18,357} \\ \text{Temporary teeth 12,547} \end{array} \right\}$  Total 30,904(5) Extractions  $\left\{ \begin{array}{l} \text{Permanent teeth 8,504} \\ \text{Temporary teeth 67,230} \end{array} \right\}$  Total 75,734

(6) Administrations of general anaesthetics for extractions 8,318

(7) Other operations  $\left\{ \begin{array}{l} \text{Permanent teeth 2,394} \\ \text{Temporary teeth 10,856} \end{array} \right\}$  Total 13,250*Group V.—Uncleanliness and verminous conditions.*

- (i.) Average number of visits per school made during the year by the School Nurses.....7·46
- (ii.) Total number of examinations of children in the Schools by School Nurses.....217,397
- (iii.) Number of individual children found unclean.....19,945
- (iv.) Number of children cleansed under arrangements made by the Local Education Authority.....51
- (v.) Number of cases in which legal proceedings were taken :
  - (a) Under the Education Act, 1921.....Nil.
  - (b) Under School Attendance Byelaws.....122.

**SECONDARY SCHOOLS  
AND  
OTHER INSTITUTIONS FOR HIGHER EDUCATION.**

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TABLE I.—RETURN OF MEDICAL INSPECTIONS.

NUMBER OF CHILDREN INSPECTED 1ST JANUARY, 1925, TO 31ST DECEMBER, 1925.						
Number of Routine Medical Inspections	...	...	...	...	...	4,137
Number of Special Medical Inspections	...	...	...	...	...	132
Number of Re-inspections	...	...	...	...	...	269
				Total	...	4,538
Number of Individual Children found to require Treatment ..	...	...	...			938

TABLE II.

A. RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION IN THE YEAR ENDED  
31ST DECEMBER, 1925.

	Defect or Disease.	Routine Inspections.		Special Inspections.	
		No. of Defects.		No. of Defects.	
	(1)	(2)	(3)	(4)	(5)
	Malnutrition ... ...	3	12	4	—
	Unclean'ness ... ...	—	—	—	—
	(See Table IV., Group V.).				
Skin	Ringworm :		Requiring treatment.		
	Scalp ... ...	—	—	—	—
	Body ... ...	1	—	—	—
	Scabies ... ...	—	—	—	—
	Impetigo ... ...	2	—	—	—
	Other Diseases (non-Tuberculous) ... ...	42	3	3	1
Eye	Blepharitis ... ...	7	1	1	—
	Conjunctivitis ... ...	4	3	—	1
	Keratitis ... ...	—	—	—	—
	Corneal Opacities ... ...	1	—	—	—
Ear	Defective Vision (excluding Squint) ... ...	320	181	13	10
	Squint ... ...	4	6	—	—
	Other Conditions ... ...	3	—	2	—
Nose and Throat	Defective Hearing ... ...	23	3	1	—
	Otitis Media ... ...	21	4	5	—
	Other Ear Diseases ... ...	3	2	—	—
Enlarged Cervical Glands	Enlarged Tonsils only ... ...	57	42	3	—
	Adenoids only ... ...	8	1	—	—
	Enlarged Tonsils and Adenoids ... ...	27	4	—	1
Defective Speech	Other Conditions ... ...	43	7	—	—
	Cervical Glands (Non-Tuberculous) ... ...	1	6	—	2
Teeth—Dental Diseases	Defective Speech ... ...	4	—	—	—
	(See Table IV., Group IV.)	628	2	15	—
Heart and Circulation.	Heart Disease :		Requiring treatment.		
	Organic ... ...	17	4	1	2
	Functional ... ...	10	12	1	1
	Anæmia ... ...	94	10	2	—
Lungs	Bronchitis ... ...	8	—	2	1
	Other Non-Tuberculous Diseases ... ...	2	1	—	—
Tuberculosis.	Pulmonary :		Requiring treatment.		
	Definite ... ...	1	2	—	—
	Suspected ... ...	—	—	—	—
	Non-pulmonary				
	Glands ... ...	1	1	—	—
	Spine ... ...	—	—	—	—
Nervous System.	Hip ... ...	1	—	—	—
	Other Bones and Joints ... ...	—	—	—	—
	Skin ... ...	—	—	—	—
	Other Forms ... ...	—	—	—	—
Deformities	Epilepsy ... ...	—	—	—	—
	Chorea ... ...	1	3	—	—
	Other Conditions ... ...	7	1	—	—
Other Defects and Diseases	Rickets ... ...	4	—	—	—
	Spinal Curvature ... ...	54	15	4	3
	Other Forms ... ...	69	27	4	1
	Other Defects and Diseases ... ...	125	25	6	5





